



P O S E I D O N R E S O U R C E S

October 9, 2007

VIA EMAIL & FEDERAL EXPRESS

California Coastal Commission
Energy and Ocean Resources Unit
Attn: Mr. Tom Luster
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

Re: Carlsbad Desalination Project Coastal Development Permit Application No. E-06-013 – Coastal Habitat Restoration and Enhancement Plan

Dear Mr. Luster:

In response to your request for additional information regarding Poseidon's plans to mitigate any unavoidable impacts to marine resources associated with the operation of the proposed Carlsbad Desalination Project (CDP), enclosed is Poseidon's proposed Coastal Habitat Restoration and Enhancement Plan.

Poseidon received eight proposals for coastal habitat restoration and enhancement projects in response to its August 2007 request for statements of interest.

The Coastal Habitat Restoration and Enhancement Plan includes the restoration and enhancement of up to 36.8 acres of coastal wetlands and/or other activities which will benefit the coastal environment in San Diego County and will be consistent with applicable policies of State, regional and local regulatory agencies. Poseidon previously committed to fund up to \$1.84 million in mitigation, restoration and enhancement project(s), based on an approximate \$50,000 per-acre cost for previous projects of a similar nature, and Poseidon's commitment to provide up to 36.8 acres of habitat restoration. After developing the Coastal Habitat Restoration and Enhancement Plan, Poseidon is voluntarily increasing its monetary commitment for mitigation of the impingement and entrainment effects of stand-alone CDP operations to a maximum of \$2.79 million.

Funding up to \$2.79 million in restoration projects is consistent with the San Dieguito proposal (described in Attachment 2 of the enclosure), which meets or exceeds Poseidon's commitment to restore and enhance 36.8 acres of coastal habitat, and will serve to more than fully mitigate any impacts of the CDP.

Poseidon Resources Corporation

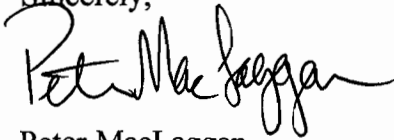
501 West Broadway, Suite 840, San Diego, CA 92101, USA
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Project Office: 4600 Carlsbad Boulevard, Carlsbad, CA 92008

The Coastal Restoration and Enhancement Plan will provide significant environmental benefits beyond fully mitigating the CDP's potential intake impacts. These benefits include the enormous ecological value of the restored acreage that will accrue to valuable wetland species completely unaffected by CDP operations, such as the numerous riparian birds, reptiles and mammals that will utilize the wetland for foraging, cover and nesting. Additionally, phytoplankton, zooplankton and invertebrate species, that are largely unaffected by CDP operations, benefit directly from the expanded carrying capacity of the restored habitat.

Poseidon Resources is prepared to discuss the development and implementation of the Coastal Habitat Restoration and Enhancement Plan with the Coastal Commission and its staff at any time.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter MacLaggan". The signature is fluid and cursive, with the first name "Peter" and last name "MacLaggan" clearly distinguishable.

Peter MacLaggan
Senior Vice President

Cc Judy Brown, State Lands Commission



POSEIDON RESOURCES

CARLSBAD DESALINATION PROJECT

**COASTAL HABITAT RESTORATION
AND ENHANCEMENT PLAN**

October 2007



CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

The Carlsbad desalination project (CDP) is proposed to be located adjacent to the Encina Power Station (EPS) and, when constructed, will use the power plant cooling water system as source water for production of 50 million gallons per day (MGD) of fresh drinking water. When both the EPS and the CDP are operating, the EPS would provide an adequate volume of seawater for the operation of the CDP. Under this mode of operation, the incremental impingement and entrainment effects and discharge impacts of the CDP would be insignificant.

When the EPS operations are discontinued or the EPS intake flow is lower than the minimum flow of 304 MGD needed for operation of the CDP, the CDP's use of the EPS's existing intake may result in potential incremental impingement and entrainment of marine organisms. The purpose of this Coastal Habitat Restoration and Enhancement Plan (CHREP) is to outline key steps and potential alternatives for mitigation of the impingement and entrainment effects of the CDP operations.

1.2 RATIONALE FOR PROPOSED RESTORATION MEASURES

The proposed CHREP is based on a model (Empirical Transport Model) that estimated the portion of the larvae of each target fish species at risk of entrainment with the intake source water. Multiplying the average percent of populations at risk by the physical area from which the fish larvae might be entrained, yields an estimate of the amount of habitat that must be restored to replace the lost fish larvae. This estimate is referred to as the area (acreage) of habitat production foregone (APF).

The entrainment effect of the stand-alone operation of the desalination plant extends over 12.2 percent of the total area that could be potentially impacted by the intake operations. Specifically, 12.2 percent of the area of Aqua Hedionda Lagoon's habitat that supports the entrained species is 36.8 acres. Thus, the restoration area needed to fully mitigate the CDP entrainment losses is 36.8 acres. The restoration requirement is estimated under worst-case conditions when the power plant is not operating and the existing pumps are operated solely to deliver 304 MGD of seawater for the operation of the desalination plant.



It is generally accepted that this approach results in an overestimate of the number acres that would be necessary to fully mitigate the CDP entrainment and impingement effects, resulting in a net enhancement of the coastal habitat. The Coastal Habitat Restoration and Enhancement Plan provides significant environmental benefits beyond fully mitigating the CDP's potential intake impacts because the APF calculation does not take into account the enormous ecological value of the restored acreage that will accrue to valuable wetland species completely unaffected by CDP operations, such as the numerous riparian birds, reptiles and mammals that will utilize the wetland for foraging, cover and nesting. Nor does the calculation consider the myriad of phytoplankton, zooplankton and invertebrate species that are largely unaffected by CDP intake operations and benefit directly from the lagoon's expanded carrying capacity.

The CHREP includes the restoration and enhancement of up to 36.8 acres of coastal wetlands and/or other activities which will benefit the coastal environment in San Diego County and will be consistent with applicable policies of State, regional and local regulatory agencies. Poseidon previously committed to fund up to \$1.84 million in mitigation, restoration and enhancement project(s), based on an approximate \$50,000 per-acre cost for previous projects of a similar nature, and Poseidon's commitment to provide up to 36.8 acres of habitat restoration. After developing the CHREP, Poseidon is voluntarily increasing its monetary commitment for mitigation of the impingement and entrainment effects of stand-alone CDP operations to a maximum of \$2.79 million. Funding up to \$2.79 million in restoration projects is consistent with the San Dieguito Coastal Habitat Restoration proposal, described below, which meets or exceeds Poseidon's commitment to restore and enhance 36.8 acres of coastal habitat, and will serve to more than fully mitigate any impacts of the CDP.

1.3 KEY CHREP OBJECTIVE AND GOALS

The main objective of the CHREP is to implement one or more activities which preserve, restore and enhance exiting wetlands, lagoons or other high-productivity near-shore coastal areas located in the vicinity of Agua Hedionda Lagoon and/or elsewhere in San Diego County. Examples of types of activities that may be included in the CHE Project include:

- Wetland Restoration;
- Coastal Lagoon Restoration;
- Restoration of Historic Sediment Elevations to Promote Reestablishment of Eelgrass Beds;
- Marine Fish Hatchery Enhancement;
- Contribution to a Marine Fish Hatchery Stocking Program;



- Artificial Reef Development;
- Kelp Bed Enhancement.

The main CHREP goals are:

- Creation or Restoration of Coastal Habitat. The primary objective of the CHREP is to create or restore coastal habitat similar to that of Agua Hedionda Lagoon, which will provide measurable long term environmental benefits adequate to mitigate potential impingement and entrainment impacts associated with CDP operations.
- Development of a Technically Feasible Project. The coastal enhancement activities will rely on well-established methods, techniques and technologies for development and nurturing of coastal habitat of high productivity and long-term sustainability.
- Stakeholder Acceptance for the Selected Project. Implementation of project(s) with a well-defined scope and high priority for the host community and environmental agencies and organizations in charge of coastal habitat preservation, restoration development.
- Ability to Measure Performance. The CHREP will target coastal restoration and enhancement activities with clearly defined methodology to measure performance and success which can be completed within one year from the startup of the operation of the CDP.

As a next step of the implementation of the CHREP, Poseidon Resources plans to request the submittal of detailed proposals for one or more of the projects listed in Section 2.2, explore other potential projects that may be identified at a later date, and review and select one or more potential projects for implementation in consultation with the California Coastal Commission and the San Diego Regional Water Quality Control Board.

Once the scope of the CHREP is defined and approved by all pertinent regulatory agencies, Poseidon will proceed with project implementation. The coastal enhancement initiatives included in the scope of the CHREP are planned to be selected and initially funded within one year of commencement of the desalination plant operations.



CHAPTER 2

COASTAL HABITAT ENHANCEMENT ALTERNATIVES

2.1 IDENTIFICATION OF ALTERNATIVES

In order to identify suitable coastal habitat enhancement alternatives, on August 31, 2007, Poseidon issued a request for expression of interest (REI) for Development and Implementation of Coastal Habitat Enhancement Project associated with the Carlsbad Desalination Plant (CDP) (Attachment 1). This REI defines the key objectives and goals of the CHREP and identifies criteria which will be used for the selection of specific activities which will be implemented under this project.

2.2 POTENTIAL COASTAL HABITAT ENHANCEMENT PROJECTS

To date, Poseidon has received eight Statements of Interest for coastal restoration and enhancement projects in response to the REI issued in August 2007. Seven of these proposals include specific coastal enhancement opportunities listed below:

1. San Dieguito Coastal Habitat Restoration;
2. City of Oceanside Loma Alta Lagoon Restoration;
3. Aqua Hedionda Lagoon – Land Acquisition for Expansion of Ecological Reserve;
4. Aqua Hedionda Lagoon – Eradication of Invasive Exotic Plants and Restoration of Native Vegetation;
5. Carlsbad Aquafarm at Agua Hedionda Lagoon – Abalone Stock Enhancement;
6. Buena Vista Lagoon Ecological Reserve – Completion of Restoration/Enhancement Plan Environmental Analysis;
7. Frazee State Beach – Coastal Bluff Habitat Restoration.



A brief summary of the scope and key benefits of each of the seven coastal habitat enhancement projects is presented below. The Statements of Interest received to date are provided as Attachments 2 through 8 of this document.

1. San Dieguito Coastal Habitat Restoration

Project Proponent

The proponent for this project is San Dieguito River Park Joint Powers Authority (local government agency in partnership with the San Dieguito River Valley Conservancy (501(c)(3) organization).

Project Scope

This project involves the development of a total of 37.26 acres of coastal habitat in the San Dieguito Lagoon Area that is above and beyond what is included in the ongoing Southern California Edison Wetlands Restoration (SCE) Project. The majority of the coastal habitat will be wetlands and associated native grassland supporting wetland species. The new coastal habitat will be created from what is now entirely disturbed land.

The San Dieguito Lagoon is located approximately 12.5 miles south of Agua Hedionda Lagoon, and was historically one of the largest lagoons in San Diego County. The completion of this project is targeted for March 2010, by which the project is planned to be fully functional and to produce sustainable environmental benefits. A more detailed scope of this project is provided in Attachment 2.

Project Benefits and Merits

The project location was chosen to expand the number of acres of functional wetlands and associated habitat in the San Dieguito Lagoon area, by supplementing the 150-acre Wetlands Restoration Project, which is currently underway.

The proposed restoration projects will create 28.74 acres of wetlands and 8.52 acres of associated native grassland habitat from what is now entirely disturbed land. The current state of the land chosen for this project, results from decades of fill, grading and/or agricultural use, rendering it unsuitable for supporting native species that rely on freshwater/intertidal marsh or upland habitat. The fund request includes a 5-year period of maintenance and monitoring to ensure the successful re-establishment of planted species. A second component of this proposal is funding for enhanced water quality sampling, testing and monitoring of the proposed Water Quality Treatment Ponds.



The proposal targets 37.26 acres of coastal wetlands and associated native grassland are within two miles of the coast. The treatment ponds are located within 1.5 miles of the coast. Both project locations are immediately adjacent to the San Dieguito Wetlands Restoration Project boundary. The Wetlands Restoration Project, largely funded by Southern California Edison, is designed to create 115 acres of coastal wetlands, maintain the inlet mouth in an open condition in perpetuity (valued at the equivalent of 35 acres of wetland creation) and create 92 acres of coastal sage scrub by 2010.

The projects described in this proposal will create additional habitat that will: increase the acreage of wetlands populated by plant species with known ability to filter out contaminants, thereby improving water quality; increase the area of native habitat capable of capturing sediment, reducing stream flow and increasing infiltration into groundwater stores; and, increase the acreage of native vegetation communities able to support wildlife, including migratory waterfowl and special status species such as the Light-Footed Clapper Rail.

The proposed San Dieguito Coastal Habitat Restoration Project:

- will generate coastal habitat comparable to that found in and around Agua Hedionda Lagoon;
- is consistent with the requirements of, and is supported by, a broad array of local, state and federal agencies, including the California Coastal Commission, Regional Water Quality Control Board, National Marine Fisheries Service, US Fish & Wildlife Service and the California Dept. of Fish & Game;
- will create 37 acres of coastal habitat;
- is located in San Diego County, on the coast, approximately 12.59 miles south of the Agua Hedionda Lagoon;
- will provide sustainable, comprehensive environmental benefits for water quality, habitat diversity for species abundance and for sensitive and endangered species in perpetuity; and
- leverages a specific grant of \$550,000 from the State Water Resources Control Board; however, in reality it leverages a great deal more due to the association with the restoration of the tidal wetlands in the San Dieguito Lagoon; the previous work by public agencies in purchasing land in the lagoon; public



support and involvement in creation and approval of the Park Master Plan and the Environmental documents for the San Dieguito Coastal Area restoration.

2. Loma Alta Lagoon Restoration

Project Proponent

The proponent for this project is the City of Oceanside Water Utilities Department.

Project Scope

This project involves the restoration of a total of 3.5 acres of wetland habitat in the Loma Alta Lagoon located at the western end of Loma Alta Creek just before it reaches the Pacific Ocean. The site is north of Agua Hedionda Lagoon and Buena Vista Lagoon in the City of Oceanside. This project aims to reclaim blighted industrial areas for Loma Alta Lagoon wetland habitat enlargement.

The project consists of restoration of five parcels of land. Three of these parcels are owned by the City of Oceanside (2.62 acres) and two (0.89 acres) are privately owned. The project will involve two key phases: (1) environmental assessment and land acquisition; (2) wetland restoration. This project is planned to be completed within 33 months. A more detailed project scope and schedule are presented in Attachment 3.

Project Benefits and Merits

This project will create 3.5 acres of new wetland habitat comparable to that found in and around Agua Hedionda Lagoon. The Loma Alta Lagoon Restoration Project is consistent with the goals of the Southern California Wetlands Recovery Project. Reclaiming the existing blighted industrial areas for lagoon enlargement and enhancement would result in increased lagoon habitat area; in reduced flood incidents upstream; and would create recreational and educational opportunities for local residents and visitors.

3. Expansion of Agua Hedionda Lagoon Ecological Reserve

Project Proponent

The proponent for this project is the Agua Hedionda Lagoon Foundation.

Project Scope

This project includes the acquisition and preservation of land near the Agua Hedionda Lagoon's Ecological Reserve to serve as a coastal habitat for wildlife and migratory



birds. The land is located on the north side of Agua Hedionda Lagoon (see Attachment 4 for more details).

Project Benefits and Merits

This project will provide a means for protecting and increasing habitat for migrating birds and endangered species. It also will help insure that nearby archeological sites will remain undisturbed and adjacent Ecological Reserve is maintained as useful wildlife habitat. Foot trails through the Reserve will be proposed to the Department of Fish & Game in exchange for adding land to the Reserve. Enhancing the quality of the Agua Hedionda Lagoon Ecological Reserve will also boost eco-tourism in the area. The project is planned to be completed by the end of year 2010.

4. Agua Hedionda Lagoon – Eradication of Invasive Exotic Plants and Restoration of Native Vegetation

Project Proponent

The proponent for this project is the Agua Hedionda Lagoon Foundation.

Project Scope

The density, biomass and diversity of invasive plant species in the Agua Hedionda Lagoon Watershed are so extensive, that the ability of the natural plant communities to treat nutrients and contaminants from surface runoff into the lagoon has been diminished significantly. The scope of this project is to remove exotic invasive plant species and replace these species with appropriate native plants to restore the protective function of the lagoon watershed vegetation (Attachment 5). The project is planned to be completed by December 2009.

Project Benefits and Merits

This project aims to restore the native vegetation in the Agua Hedionda Watershed, which is an essential step towards re-establishing the hydrologic and ecological functions of these riparian and coastal wetland habitats. The project is expected to boost the natural ability of the native riparian and wetland plant habitats to sequester contaminants carried to the lagoon by surface runoff, to reduce flooding and bank erosion, and diminish sediment transport thereby increasing the biological productivity of the Agua Hedionda Lagoon.



5. Agua Hedionda Lagoon – Abalone Stock Enhancement

Project Proponent

The proponent for this project is Carlsbad Aquafarm.

Project Scope

This project will create a stock of 100,000 abalone at the Carlsbad Aquafarm located in the Agua Hedionda Lagoon and use this stock to replenish the population of abalone near the intake to the lagoon and the project discharge area (Attachment 6). Carlsbad Aquafarm is currently concentrating its efforts on commercial farming of the Green Abalone and also culturing both Red and Pink Abalone. The farm is well equipped with the facilities and personnel to spawn and raise abalone, as well as experienced divers familiar with abalone biology and ecology to manage and monitor the success of the project. The abalone stock enhancement project can be completed by 2011.

Project Benefits and Merits

Abalone is a key part of the Southern California coastal ecosystem. However, aggressive harvesting of this aquatic resource has resulted in stock depletion and the recent closure of both commercial and recreational fisheries for all abalone species in this region. This project will help replenish and sustain the abalone stock in the area of the Agua Hedionda Lagoon.

6. Buena Vista Lagoon – Restoration/Enhancement Plan Environmental Analysis

Project Proponent

The proponent for this project is the Buena Vista Lagoon Foundation, Carlsbad.

Project Scope

Funds dedicated to this project will facilitate the completion of the Restoration/Enhancement Plan's Environmental Analysis and allow the timely implementation of the Buena Vista Lagoon restoration project (Attachment 7).

Project Benefits and Merits

This coastal habitat enhancement effort is one of the key wetland restoration projects in the San Diego County. Support for this project would facilitate the creation of productive coastal wetland habitat similar to that of Agua Hedionda Lagoon.



7. Frazee State Beach – Coastal Bluff Habitat Restoration

Project Proponent

The proponent for this project is the State of California Department of Parks and Recreation.

Project Scope

The coastal bluff restoration project at Frazee State Beach encompasses approximately 5.8 acres of natural coastal bluff area (Attachment 8). This beach is located between Pine Avenue to the North and the mouth of Agua Hedionda Lagoon to the South, approximately ¼ mile from the desalination plant site. Much of the original coastal bluff habitat has been degraded by infestation of non-native plant species, trash dumping, poorly engineered and maintained storm drain outfalls, and lack of funding for adequate maintenance. The proposed project aims to eliminate non-native plant species from the beach and replace these species with native vegetation as well as to create an interactive public interpretive program to support public involvement and education, and to maintain sustainable natural coastal environment at the Frazee State Beach. The project can be completed and yield coastal enhancement benefits by year 2011.

Project Benefits and Merits

The proposed project encompasses the restoration of approximately six acres of coastal bluff that can support a number of unique native plant and animal species typical for the coastal environment near Agua Hedionda Lagoon. The project will also have storm erosion protection benefits. In addition, because the project is an island of coastal bluff within a popular urban area, it will benefit the local community and visitors and promote eco-tourism.

2.3 SELECTION OF COASTAL HABITAT ENHANCEMENT PROJECTS

The selection of one or more coastal habitat enhancement activities for implementation under the Poseidon CHREP will be completed based on the proposals presented herein and other proposals as they become available in the near future. In consultation with the California Coastal Commission, the Regional Water Quality Control Board, and other agencies and stakeholders, Poseidon intends to short-list one or more projects and request detailed proposals from the successful proponents. Poseidon plans to evaluate the detailed proposals in consultation with all pertinent regulatory agencies and firm up the scope of the CHREP within six months of the receipt of all project related permits.



Criteria that will be used to select the coastal enhancement alternatives that will be incorporated in the CHREP include:

- Projects consistent with the applicable requirements of the California Coastal Commission, the San Diego Regional Water Quality Control Board, National Marine Fisheries Service, CA Department of Fish and Game and other federal, state and local agencies which have jurisdiction over coastal habitat restoration actions.
- Projects relating to wetland/marshland restoration areas ranging between 5 and 37 acres.
- Projects located in San Diego County and in or near Aqua Hedionda Lagoon;
- Projects that hold the promise for long-term environmental enhancement benefits.
- Projects that have opportunities for leveraging of funds/availability of matching funds. Opportunities for leveraging these funds by inclusion of the CHREP into a larger coastal enhancement or restoration Project or by combining it with other ongoing projects to maximize environmental benefits will be favorably considered.
- Poseidon will fund project(s) in an amount not to exceed \$2.79 million. Funding up to \$2.79 million in restoration projects is consistent with the San Dieguito Coastal Habitat Restoration proposal, described above, which meets or exceeds Poseidon's commitment to restore and enhance 36.8 acres of coastal habitat, and will serve to more than fully mitigate any impacts of the CDP.

ATTACHMENT 1



POSEIDON RESOURCES

**REQUEST FOR EXPRESSIONS OF INTEREST
(REI)

FOR

DEVELOPMENT AND IMPLEMENTATION
OF
COASTAL HABITAT ENHANCEMENT
PROJECT (CHE)

ASSOCIATED WITH

THE CARLSBAD SEAWATER DESALINATION
PLANT**

Response Deadline:

September 24th, 2007 by 5:00 PM PST

Issued - August 31, 2007



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SECTION 1 – PROJECT OVERVIEW AND OBJECTIVES

1.1 Introduction

Poseidon Resources (Poseidon) is developing a Seawater Desalination Project, which is planned to be located adjacent to the Encina Power Station (EPS) in Carlsbad, California. When constructed, this Project will provide 50 million gallons per day (MGD) of fresh drinking water to public water agencies and municipalities in San Diego County. The source water for the Carlsbad Seawater Desalination Project will be collected from the cooling water discharge canal of the EPS, which in turns collects seawater from Agua Hedionda Lagoon (Figure 1).

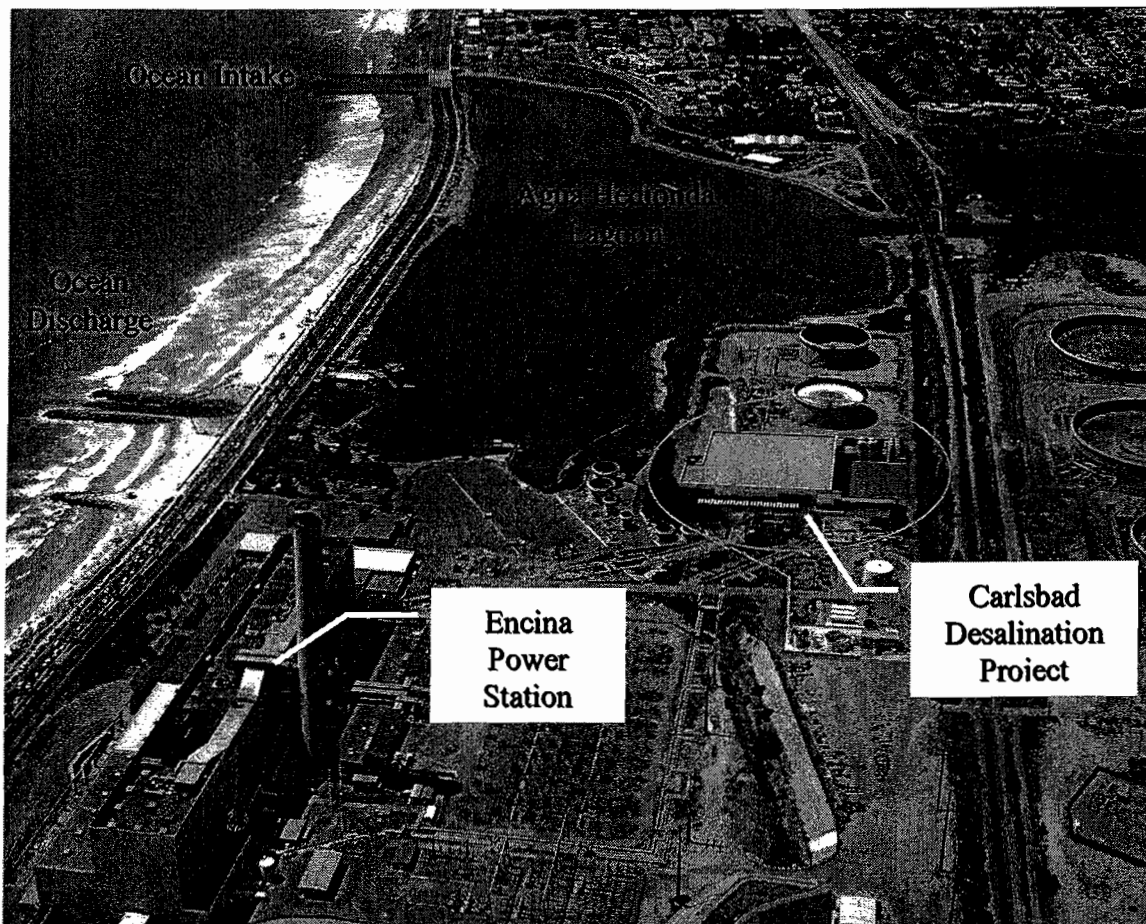


Figure 1 – Carlsbad Seawater Desalination Project Site

Extensive environmental impact analysis of the Carlsbad Desalination Project indicates that its operation will be environmentally safe and neither the desalination plant's intake nor its discharge will significantly impact on marine life in Agua Hedionda Lagoon or the near shore ocean environment. However, in fulfillment of its commitment to contribute to the improvement and enhancement of the Pacific Coast environment in San Diego



County, Poseidon has offered to implement and/or contribute to Coastal Habitat Enhancement (CHE) Projects.

1.2 Objective of the Request for Expressions of Interest

Poseidon seeks communication with respondents interested in expanding ongoing Coastal Habitat Enhancement Projects, or possibly developing new Projects related to CHE Projects. Responses are solicited from qualified firms, foundations, public and private organizations and businesses, consortia, and entities (herein referred to as "Respondents"). Based on merit, Poseidon may participate in funding of one or more ongoing or new Projects.

Successful Respondent(s) will enter into agreement with Poseidon to provide all-inclusive services associated with the development and implementation of the selected CHE Project(s).

1.3 Key CHE Project Objectives and Requirements

The main objective of the Poseidon CHE Project is to preserve, restore or enhance existing wetlands, lagoons or other high-productivity near-shore coastal areas located in San Diego County. Projects eligible for consideration will target the generation or restoration of a coastal habitat comparable to that found in and around Agua Hedionda Lagoon. Other key eligibility criteria include:

- Projects consistent with the applicable requirements of the California Coastal Commission, the San Diego Regional Water Quality Control Board (RWQCB), National Marine Fisheries Service, and other federal, state and local agencies which have jurisdiction over coastal habitat restoration actions.
- Projects dealing with restoration areas ranging between 5 and 37 acres.
- Projects located in San Diego County and in or near Agua Hedionda Lagoon will receive higher priority.
- Projects that hold the promise for long-term environmental enhancement benefits.
- Projects that have opportunities for leveraging of funds/availability of matching funds. Opportunities for leveraging these funds by inclusion of the CHE Project into a larger coastal enhancement or restoration Project or by combining it with other ongoing Projects to maximize environmental benefits will be favorably considered.



Examples of types of Projects that may be eligible include:

- Wetland Restoration
- Coastal Lagoon Restoration
- Restoration of Historic Sediment Elevations to Promote Reestablishment of Eelgrass Beds
- Marine Fish Hatchery Enhancement
- Contribution to a Marine Fish Hatchery Stocking Program
- Artificial Reef Development
- Kelp Bed Enhancement.

The list is not all-inclusive. Respondents are encouraged to propose other Projects that meet the selection criteria.

1.4 CHE Project Goals

The main CHE Project goals and priority are:

- Creation Or Restoration Of Coastal/Lagoon Habitat. One of the main objectives of the CHE Project is to create or restore coastal and or lagoon habitat, which will provide long term environmental benefits. These types of Projects will be given a higher priority. Projects of short benefit span or limited benefit sustainability will be given a lesser priority.
- Stakeholder Acceptance. Projects with a well-defined scope and high priority for the host community and environmental agencies in charge of coastal habitat preservation, restoration development will receive higher priority. These agencies might include but is not limited to the CA Coastal Commission, National Marine Fisheries Service, CA Fish and Game, and the RWQCB.
- Consistency with Ongoing Marine Resource Agency Work and Environmental Planning. A number of well-defined wetland/lagoon restoration Projects are in the process of development or are already underway in San Diego County. These Projects would be given higher priority as long as the Projects comply with the requirements defined in Section 1.3 of this REI.
- Project Implementation Costs. The total cost for the implementation of individual



Projects shall range from \$100,000 to \$1.5 Million. This cost includes all operation and maintenance expenditures associated with maintaining and monitoring the success of the coastal habitat enhancement Project over a period of 5 years

- Ability to Measure Performance. Projects with clearly defined methodology to measure performance and success will be given higher priority.
- Technical Feasibility. The proposed Project should relay rely on well-established methods, techniques and technologies for development and nurturing of coastal habitat of high productivity and long-term sustainability. Experimental Projects must be well justified by support in peer reviewed literature and based on solid scientific rationale and best practices.

Depending on the nature of a particular coastal enhancement Project, the relative importance and weighting of these priorities may vary.



SECTION 2 – CONTRACTOR PROCUREMENT PROCESS

2.1 Key Activities and Schedule

Respondent selection for participation in the Poseidon CHE Project will proceed according to the following timetable.

Activity	Deadline
Respondent Submittal of Letter Expressing Interest (LEI)	September 24, 2007
Interviews with Respondents	October 1 to 15, 2007
Issuance of Request for Proposals	October 25, 2007
Proposals Due	December 15, 2007
Project Selection	TBD

Note: Poseidon Resources reserves the right to modify any or all of the above dates.

2.2 Requests for Clarifications, Site Visits, and Pre-Submittal Meetings

Respondents may request clarifications related to this REI. Questions and clarification requests will be accepted and prospective Respondents are encouraged to submit written inquiries by **September 18, 2007**.

All questions and clarifications regarding this REI shall be submitted to:

Mr. Peter MacLaggan
E-mail: pmaclaggan@poseidon1.com

2.3 Letter of Expression of Interest Submittal Deadline

The deadline for submittal of the Letter of Expression of Interest (LEI) is **September 24, 2007 at 5:00 PM Pacific Standard Time (PST)**. Specific requirements related to submittal time, location, structure, format, and information of the LEI are presented in detail in Section 3 of this REI.

2.4 Interviews with Respondents to this REI

REI Respondents may be invited for interview with Poseidon staff during the period of October 1 to 15, 2007 in San Diego, California. The purpose of the interview is to gain better understanding of the nature, scope and implementation timeframe of the CHE



Project proposed by the Respondent, discuss qualifications of the Respondent's team and its experience with development and implementation of similar Projects.

2.5 Next Steps of the Procurement Process

Based on the information provided by the Respondent in the LEI and the subsequent interview, Poseidon will shortlist Respondents who will be asked to submit full proposals based on a distributed RFP.



SECTION 3 – INSTRUCTIONS FOR PREPARATION AND SUBMITTAL OF LETTERS OF EXPRESSION OF INTEREST

This section describes the requirements associated with the content of the Letter of Expression of Interest (LEI).

3.1 Letter Contents

The LEI for the Poseidon Coastal Habitat Enhancement Project should include the following sections:

Statement of Expression of Interest

The Respondent shall state that the legal entity they represent (lagoon foundation, private business, public organization or other public or private entity) is interested in participating in the Poseidon Coastal Habitat Enhancement Project.

Brief Project Description (2 page maximum)

Respondent may propose one or more Projects for consideration. The merits of the proposed Project(s) and the nature, size, scope and location must be described. If necessary, provide a map or other visual information depicting Project location and configuration. Indicate whether the Project is part of an existing and ongoing effort or a new initiative in the process of conceptualization, permitting, design, funding or implementation. Indicate the following key Project schedule milestones:

- Commencement Date of Project Implementation;
- Target Project Completion Date;
- Earliest Date When the Project Will Reach Full Capacity to Produce Sustainable Environmental Benefits;
- Length of Time of Sustainable Project Environmental Benefits (in Years).

Budget

Respondent shall include a general estimate of total expenditures for implementation of the proposed Project and indicate the portion of the capital expenditure to be funded by Poseidon. Also provide the estimated annual cost for Project maintenance and performance-monitoring with a clear statement of the portion of this annual expenditure to be funded by Poseidon.

Project Benefits and Merits (1 page maximum)

Describe the key Project benefits in terms of coastal habitat enhancement and indicate how the proposed Project will meet the objectives and requirements defined in Section 1.3 of this REI.



Project Team (1 page maximum)

List the names, office location, and positions for the key members of the Respondent's team. Describe previous or ongoing Projects indicating your group's performance capacity for the Poseidon CHE Project.

Respondent Contact Information

The LEI cover page shall indicate the name, address, phone, fax, numbers and e-mail address of the primary point of contact representing the Respondent to whom further information should be forwarded.

3.2 Format, Method and Deadline of Letter Submittal

This LEI is not to exceed 6 pages, not including the cover page. Three (3) copies of the Respondent's LEI and 1 electronic copy shall be submitted by mail to:

Mr. Peter MacLaggan
Senior Vice President - Development
Poseidon Resources Corporation
501 West Broadway
Suite 1260
San Diego, CA 92101

Tel. 619-595-7802

Fax. 619-595-7858

E-mail: pmaclaggan@poseidon1.com

The deadline for submittal of the LEIs is **September 24, 2007 at 5:00 PM Pacific Standard Time (PST).**



SECTION 4 – LEI EVALUATION

4.1 Evaluation Process

Respondent's LEI will be assessed based on the review of the information provided in the submittal. The evaluation process may include solicitation of additional information from the Respondent or third parties.

Some or all of the Respondents may be invited for an interview by telephone or for oral presentation as needed. Respondents with the highest ranked Projects will be invited to submit proposals in the next step of the procurement process.

4.2 Evaluation Criteria

Respondent's Proposal will be evaluated using the following key criteria:

1. Consistency with the Project Objectives;
2. Project Selection Criteria Described in Section 1.4 of this REI;
3. Responsiveness to this REI.

Responsiveness to this REI, including adherence to the REI instructions for submittal content, preparation, format, and structure will be important in establishing Respondent eligibility to provide services for this Project.



SECTION 5 – SPECIAL CONDITIONS

5.1 Poseidon Rights and Options

This REI does not commit Poseidon to award a contract for the implementation of the CHE Project, or to procure or contract for any work on this Project. Poseidon shall not be responsible for costs or expenses incurred by a Respondent in preparation of the LEI, responses to clarification requests, or re-submittals, interviews, or subsequent negotiations. Each Respondent shall prepare the requested materials and submittals at its own expense and with the understanding that it cannot make any claims for reimbursement from Poseidon for the costs or expenses associated with this or any future steps of the procurement process.

Poseidon reserves the right to award the CHE Project contract to one or more Respondents determined by Poseidon to offer coastal enhancement benefits at the price, terms and conditions it deems most attractive, at its sole discretion. Poseidon may award the funds allotted to the CHE Project to only one Respondent and Project or to several Respondents and/or Projects at its sole discretion.

Without limitation, Poseidon reserves and holds, at its sole discretion, the following rights and options to:

- Wave any technicalities or immaterial irregularities in Respondent's LEI;
- Cancel or amend, for any reason, in part or in its entirety, this REI including but not limited to: postpone or change schedule deadlines, submittal date, and selection and submittal requirements. If Poseidon cancels or amends this REI, all Respondents will be notified in writing by Poseidon.
- Reject any or all Proposals;
- Provide/publish Respondents' questions and Poseidon's answers to all Respondents;
- Request additional information and/or clarifications from any Respondent to this REI;
- Independently verify the information provided by a Respondent;
- Issue subsequent REIs;
- Disqualify Respondents from participation in the next phases of the Contractor Procurement Process for Non-Compliance with the Requirements of this REI.



5.2 Public Records

All Letters of Expression of Interest submitted in response to this REI become the property of Poseidon. Although Poseidon is not subject to the Public Records Act, California Government Code Section 6250 et seq., some or all of the submitted information may become subject to disclosure to the general public.

Respondents may provide information exempt from public disclosure under Government Code Section 6254, including "trade secrets" under Evidence Code Section 1060. If submitting confidential information, such information shall be clearly marked "Confidential".

5.3 Release of Public Information

Respondents desiring to release information to the public related to this REI or their participation in this Project must receive prior written approval from Poseidon.

ATTACHMENT 2

Revised
Letter of Expression of Interest
Poseidon Coastal Habitat Enhancement Project
September 24, 2007

The San Dieguito River Park Joint Powers Authority, a local government agency, in partnership with the San Dieguito River Valley Conservancy, a nonprofit 501(c)(3) organization, wishes to participate in the Poseidon Coastal Habitat Enhancement Project. This proposal consists of several components, all included in the Park Master Plan for the San Dieguito Coastal Area and intended to augment the Southern California Edison Tidal Wetland Restoration Project, currently under construction.

Proposal Option 1: 37 acres of coastal habitat, grant request: \$2,440,930
Proposal Option 2: 37 acres of coastal habitat, grant request: \$2,791,091

Respondent Contact Information

Susan Carter, Deputy Director
San Dieguito River Park JPA
18372 Sycamore Creek Road
Esccondido, CA 92025
Ph: (858) 674-2275 x 11
Fax: (858) 674-2280
Email: susan@sdrp.org

Web: www.sdrp.org

Poseidon Resources LEI Brief Project Description

This grant request is for funds to implement wetland projects in the Park Master Plan for the San Dieguito Coastal Area that are above and beyond what is included in the Southern California Edison Wetland Restoration (SCE) project. The goal and purpose of the Park Master Plan, adopted by the Board of Directors of the San Dieguito River Park Joint Powers Authority (JPA) in September 2000, was to restore the coastal area of the San Dieguito River Valley, approximately 750 acres, to a well-functioning ecological unit comprising a healthy estuary and associated uplands that support diverse and abundant plant and wildlife species, and in addition provide for public access and interpretation that would lead to greater public understanding of the value of our coastal wetlands. Since the Park Master Plan was adopted, the JPA has purchased 75 additional acres of property adjacent to the JPA's lagoon property for the purpose of creating additional salt marsh and associated upland habitat.

Pursuant to the requirements of the California Coastal Commission, Southern California Edison is creating 115 acres of tidal wetlands at San Dieguito and will keep the river mouth open in perpetuity. Their project includes a new deep water lagoon on the west side of I-5, extensive finger channels on the east side of I-5 north of the river, California least tern nesting sites and berms along the river to keep the water in the riverine channel flowing to the sea without dropping sediment or flooding the newly created wetlands under normal conditions.

Implementation of the Park Master Plan

The JPA is responsible for implementing the other components of the Park Master Plan. Features of the Park Master Plan include trails and interpretive programs, enhancement of the lagoon ecosystem through creation of associated native grassland and coastal sage scrub habitat, expansion of tidal wetlands beyond the SCE project limits, and creation of a series of water quality treatment ponds. The grant funds requested in this application would be used to implement several of the projects listed above and are described in more detail below.

Water Quality Treatment Ponds. The Ponds are a 4.4 acre series of interconnected treatment ponds designed to treat concentrated urban runoff before it can impact the restored tidal wetlands. Currently urban runoff from a 313-acre residential area is funneled under the Albertson's Shopping Center on Via de la Valle directly into the lagoon area. The ponds will utilize wetland vegetation in a natural swale system to trap sediment, nutrients, chemicals, invasive plant propagules, and bacteria. As part of the project the existing invasive plant species on the site will be removed and replanted with native wetland and riparian species. Among the benefits of the project are enhanced native habitat and biodiversity, reduction of freshwater inputs into tidal wetlands, education of the public about the impacts of urban runoff, removal of invasive plant species and improvement of water quality. The JPA has received a grant of \$550,000 from the State Water Resources Control Board toward the construction of this project.

Those funds are sufficient to clear the site, build the ponds, build up the existing service road/trail through the site, and install the necessary culverts and weirs for the ponds to function hydrologically. The funds are NOT sufficient to install the appropriate native vegetation and maintain/monitor it to ensure that it meets the success criteria, or to test and monitor the water quality. We wish to conduct extensive water quality monitoring for a three year period to determine to what extent the ponds are removing contaminants from freshwater runoff and how removal rates vary with contaminant type and runoff flow rate. The purpose of the water quality monitoring is to provide scientifically robust information that will benefit the broader scientific community and state and federal agencies on the performance of treatment ponds in removing selected contaminants from runoff.

Habitat Creation: This grant request is also to create high salt marsh, seasonal salt marsh, and native grassland that would ensure that the restored San Dieguito coastal lagoon contains a diversity of habitat types. Tidal restoration alone would not result in a fully-functioning coastal ecosystem, which requires a variety of habitat types and transitional and buffer areas. Two Options are presented for consideration. The first option (Option 1) would create 37 acres of high salt marsh, seasonal salt marsh and native grassland as described in the Park Master Plan. The second option (Option 2) would still include high salt marsh, seasonal salt marsh and native grassland, but it would include a higher percentage of high salt marsh that regularly receives tidal influence, and correspondingly less seasonal salt marsh. The budget for Option 2 is included in Appendix A.

Option 1, if funded, would create 8.52 acres of native grassland that will provide foraging for raptors, insects, reptiles and mammals, and would support highly sensitive annual plants; and 28.7 acres of wetlands. The 28.7 acres of wetlands would be composed of 4 acres of tidally influenced high salt marsh, and 24.7 acres of seasonal salt marsh which would not be tidally influenced on a regular basis but would be wetted frequently enough to support salt marsh pickleweed-dominated habitat. Seasonal salt marsh is a habitat type that is necessary for organisms that spend only a portion of their life in water, such as amphibians, reptiles, certain birds and mammals. As a peripheral or edge habitat, seasonal salt marsh also serves as a transitional buffer supporting both upland and wetland species, and can also function to control water inflow and nutrient flux.

Schedule

Dates of Commencement of Project Implementation and Completion: This project is fully ready to go because all environmental documentation has been completed and approved and all permits have been received.

Ponds - A contractor has been selected for construction of the Water Quality Treatment Ponds, and work is scheduled to begin in October 2007. Depending on availability of funding from the Poseidon grant, the native vegetation landscaping will be installed beginning in March 2008. Water Quality Sampling will begin when the project is completed, expected to be September 2008.

Wetland and Associated Upland Habitat Creation – We plan to amend the contract of the contractor who was selected for construction of the Water Quality

Treatment Ponds to also include the proposed adjacent seasonal salt marsh and native grassland creation. Work will begin in September 2008, and be complete by March 2009.

Earliest Date when the Project Will Reach Full Capacity to Produce Sustainable Environmental Benefits: At one year after completion, or by September 2009 for the Treatment Ponds and March 2010 for the Habitat Creation, the plants will be functioning at sufficient capacity to produce sustainable environmental benefits.

Length of Time of Sustainable Project Environmental Benefits: The project site has been planned as a fully functioning, sustainable natural lagoon ecosystem. Because the health of the lagoon ecosystem is largely a function of the lagoon mouth and whether the lagoon inlet stays open to the sea, SCE was required by the Coastal Commission to maintain the lagoon inlet in an open condition in perpetuity. SCE will do it themselves for the next 40 years, and they have already funded an endowment with the JPA to ensure that the lagoon mouth will remain open and the rest of the lagoon ecosystem will be managed in perpetuity. In addition, the project sites have been deed-restricted for habitat restoration purposes as required by the Coastal Commission. With these two factors in place, we expect the sustainable project environmental benefits to continue in perpetuity.

Budget for Option 1

Poseidon Resources Option 1										
Tasks	Acreage	Initial Yr	Year 2	Year 3	Year 4	Year 5	Year 6	Total	Match	Poseidon
Construct Water Quality Treatment Ponds		\$ 550,000						\$ 550,000	\$ 550,000	
Native Plant Installation at Ponds - 4.4 acres	4.4	\$ 250,000						\$ 250,000		\$ 250,000
Water Quality Sampling/Testing/Reporting			\$ 45,000	\$ 30,000	\$ 30,000	\$ 15,000	\$ 15,000	\$ 135,000		\$ 135,000
Grading and Revegetation Plans for Additional Habitat (below)		\$ 35,000						\$ 35,000		\$ 35,000
Create Habitat										
(grading, planting, irrigation, weed abatement)										
Native Grasslands 8.52 acres (portion of U19)	8.52	\$ 257,463						\$ 257,463		\$ 257,463
Seasonal Salt Marsh 12.94 acres (on Boudreau)	12.94	\$ 751,102						\$ 751,102		\$ 751,102
Seasonal Salt Marsh 5.73 acres (M37)	5.73	\$ 288,719						\$ 288,719		\$ 288,719
High Salt Marsh 4 acres (M32)	4	\$ 316,506						\$ 316,506		\$ 316,506
Seasonal Salt Marsh 1.67 acres (M33)	1.67	\$ 132,140						\$ 132,140		\$ 132,140
Manage/Monitor Habitat and Ponds			\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 275,000		\$ 275,000
Total Cost		\$ 2,580,930	\$ 100,000	\$ 85,000	\$ 85,000	\$ 70,000	\$ 70,000	\$ 2,990,930	\$ 550,000	\$ 2,440,930
Total acres of habitat creation	37.26									
Detailed budgets for each of the project components have been prepared and are available as requested, or for next stage of grant process..										
These costs represent real-time contractor cost estimates, and also take advantage of the availability of on-site disposal										
so that excavated soils do not have to be carted off-site for disposal. We also included sufficient funding for										
management, maintenance and monitoring to meet the requirements of the permitting agencies for success establishment.										

Poseidon Resources LEI Project Benefits & Merits

The project location was chosen to directly expand the number of acres of functional wetland and associated habitat in the San Dieguito Lagoon area, by supplementing the 150-acre Wetlands Restoration Project currently underway. The requested funds will also allow the project to be completed within a similar timeframe as the Wetlands Restoration Project, thus avoiding a “hopscotch” approach to restoring habitat in this vicinity and thereby, hopefully, increasing the chances of success.

The restoration projects proposed in this LEI will create 28.74 acres of wetland and 8.52 acres of associated native grassland habitat from what is now entirely disturbed land. The current state of the land chosen for this project results from decades of fill, grading and/or agricultural use, rendering it unsuitable for supporting any of the native species that rely on freshwater/intertidal marsh or upland habitat. The fund request includes a 5-year period of maintenance and monitoring to ensure the successful re-establishment of planted species. A second component of this proposal is funding for enhanced water quality sampling, testing and monitoring of the proposed Water Quality Treatment Ponds.

The San Dieguito Lagoon is ~12.5 miles from Agua Hedionda Lagoon and was historically one of the largest in San Diego County. The proposal targets 37.26 acres of coastal wetlands and associated native grassland within two miles of the coast. The treatment ponds are located within 1.5 miles of the coast. Both project locations are immediately adjacent to the San Dieguito Wetlands Restoration Project boundary. The Wetlands Restoration Project, largely funded by Southern California Edison, is designed to create 115 acres of coastal wetlands, maintain the inlet mouth in an open condition in perpetuity (valued at the equivalent of 35 acres of wetland creation) and create 92 acres of coastal sage scrub by 2010. The projects described in this proposal will create additional habitat that will: increase the acreage of wetlands populated by plant species with known ability to filter out contaminants, thereby improving water quality; increase the area of native habitat capable of capturing sediment, reducing streamflow and increasing infiltration into groundwater stores; and, increase the acreage of native vegetation communities able to support wildlife, including migratory waterfowl and special status species such as the Light-Footed Clapper Rail.

It is also hoped that the Poseidon Resources funds will serve as a match for or initiate subsequent requests for outside funding to complete restoration of the remainder of the 75-acre parcel owned by the River Park known as the Boudreau property, as well as other nearby sections of the Lagoon. At least 100 acres of additional land are targeted in the Master Plan for restoration or enhancement, for all of which the River Park will continue to seek funding to complete. The proposal detailed here:

- will generate coastal habitat comparable to that found in and around Agua Hedionda Lagoon.

- is consistent with the requirements of, and is supported by, a broad array of local, state and federal agencies, including the California Coastal Commission, Regional Water Quality Control Board, National Marine Fisheries Service, US Fish & Wildlife Service and the California Dept. of Fish & Game.
- will create 37 acres of coastal habitat, which is within the Poseidon requirement of 5 to 37 acres.
- is located in San Diego County, on the coast approximately 12.59 miles from the Agua Hedionda Lagoon.
- will provide sustainable, comprehensive environmental benefits for water quality, habitat diversity for species abundance and for sensitive and endangered species in perpetuity.
- leverages a specific grant for \$550,000 as indicated on the attached budget; however, in reality it leverages a great deal more due to the association with the restoration of the tidal wetlands in the San Dieguito Lagoon; the previous work by public agencies in purchasing land in the lagoon; public support and involvement in creation and approval of the Park Master Plan and the Environmental documents for the San Dieguito Coastal Area restoration.

Poseidon Resources LEI
Project Team

San Dieguito River Park JPA

Susan Carter – Deputy Director
18372 Sycamore Creek Road
Escondido, CA 92025-2301
Ph: (858) 674-2275 x 11
Fax: (858) 674-2280
Email: susan@sdrp.org

Shawna Anderson – Principal Environmental Planner
18372 Sycamore Creek Road
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Email: shawna@sdrp.org

Jason Lopez – Resources and Trails Manager
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Escondido, CA 92025-2301
Ph: (858) 674-2275 x 16
Fax: (858) 674-2280
Email: jason@sdrp.org

San Dieguito River Valley Conservancy

Leslie Ann Woollenweber, MBA – Resources Specialist
3030 Bunker Hill Street, Suite 102
San Diego, CA 92109-5754
Ph: (858) 674-2275 x 12
Fax: (858) 674-2280
Email: leslie@sdrvc.org

The San Dieguito River Park has been involved in multiple restoration projects throughout the 55-mile-long River Park, including restoration of one acre of upland habitat in the Bernardo Mountain Preserve; the Santa Ysabel Creek restoration project where 600 feet of streambank and endangered species habitat was restored; a dump restoration site where two acres of debris were removed and coastal sage scrub planted and restored in the San Pasqual Valley; and a 26-acre Partners for Wildlife restoration project with the U.S. Fish and Wildlife Service. The River Park is also creating and restoring 1.6 acres of wetland habitat at Cloverdale Creek. The San Dieguito River Valley Conservancy received a small grant to restore 1.15 acres of upland (coastal sage scrub) habitat along the north side of the river channel on the Fairgrounds property and is actively involved in habitat restoration in Crest Canyon Open Space Park Preserve, a finger canyon off the San Dieguito Lagoon in Del Mar.

APPENDIX A

Selection of Wetland Options

Options 1 and 2 both create 37 acres of native habitat that includes 28.7 acres of wetlands. The difference between the options is the degree of tidal influence that the wetlands would receive, which is largely a function of the elevation to which the areas are graded. To receive tidal influence, the elevation must be lowered to 4.5 feet above sea level. With seasonal salt marsh, most of the moisture received is from freshwater runoff, but the vegetation that grows is salt marsh habitat because of the saline soil at the site.

Option 1 is consistent with the Park Master Plan. It creates 4 acres of tidal (high) salt marsh and 24.7 acres of seasonal salt marsh.

Option 2 would create 11.4 acres of tidal (high) salt marsh and 17.3 acres of seasonal salt marsh. This change would result from converting M33 and M37 (see attached graphics) from seasonal salt marsh to tidal (high) salt marsh.

Creating the additional tidal salt marsh involves grading sites M33 and M37 approximately 5 feet lower than in Option 1 which explains the higher cost associated with Option 2. In addition, the hydrological studies that were done as part of the Park Master Plan only addressed the plan as proposed, there would need to be additional hydrological analysis to make sure that the revised design would not have negative impacts on the Southern California Edison Wetland Restoration Project or cause other unintended consequences. The cost of the hydrological analysis is included in the proposed budget. In addition, there is the potential to convert an additional 2.74 acres from seasonal salt marsh to tidally influenced high salt marsh, but this cannot be determined until the hydrology study is completed.

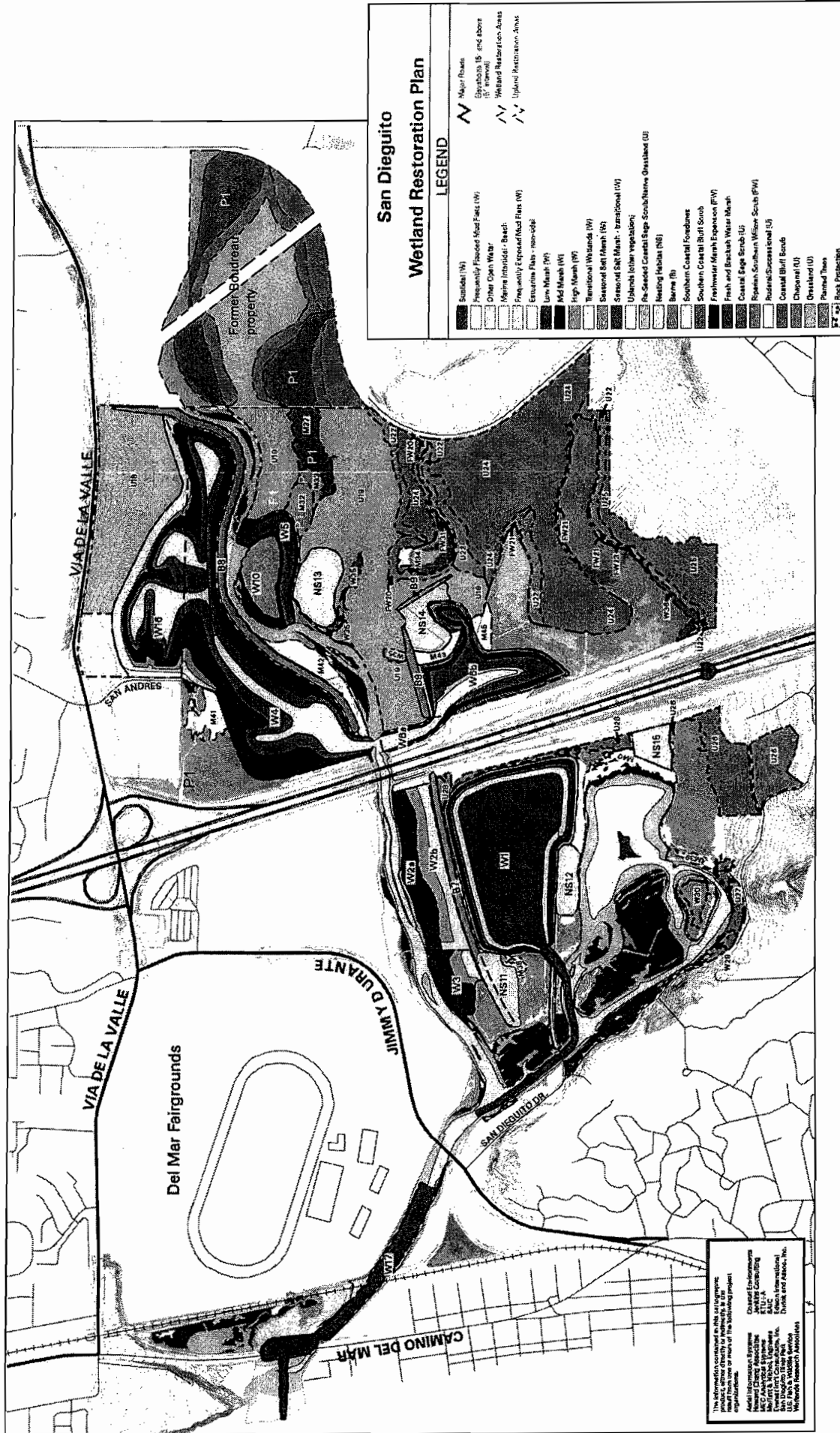
All of the sites labeled with "W" on the attached graphic are being implemented by Southern California Edison.

**APPENDIX A
Budget for Option 2**

Poseidon Resources Option 2

Tasks	Acreage	Initial Yr	Year 2	Year 3	Year 4	Year 5	Year 6	Total	Match	Poseidon
Construct Water Quality Treatment Ponds		\$ 550,000						\$ 550,000	\$ 550,000	0
Native Plant Installation at Ponds - 4.4 acres	4.4	\$ 250,000						\$ 250,000	\$	250,000
Water Quality Sampling/Testing/Reporting			\$ 45,000	\$ 30,000	\$ 30,000	\$ 15,000	\$ 15,000	\$ 135,000	\$	135,000
Grading and Revegetation Plans for Additional Habitat (below)		\$ 35,000						\$ 35,000	\$	35,000
Hydrology Analysis		\$ 20,000								
Create Habitat										
(grading, planting, irrigation, weed abatement)										
Native Grasslands 8.52 acres (portion of U19)	8.52	\$ 257,463						\$ 257,463	\$	257,463
Seasonal Salt Marsh 12.94 acres (on Boudreau)	12.94	\$ 751,102						\$ 751,102	\$	751,102
High Salt Marsh 5.73 acres (M37)	5.73	\$ 612,452						\$ 612,452	\$	612,452
High Salt Marsh 4 acres (M32)	4	\$ 316,506						\$ 316,506	\$	316,506
High Salt Marsh 1.67 acres (M33)	1.67	\$ 158,568						\$ 158,568	\$	158,568
Manage/Monitor Habitat and Ponds			\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 55,000	\$ 275,000	\$	275,000
Total Cost		\$ 2,951,091	\$ 100,000	\$ 85,000	\$ 85,000	\$ 70,000	\$ 55,000	\$ 3,341,091	\$ 550,000	\$ 2,791,091
Total acres of habitat creation	37.26									

Detailed budgets for each of the project components have been prepared and are available as requested, or for next stage of grant process. These costs represent real-time contractor cost estimates, and also take advantage of the availability of on-site disposal so that excavated soils do not have to be carted off-site for disposal. We also included sufficient funding for management, maintenance and monitoring to meet the requirements of the permitting agencies for success establishment.



Combined Conceptual Restoration Plan, SCE Tidal Restoration Plan and
JPA Non-Tidal Restoration Plan (Mixed Habitat Alternative)



TERRA
ENVIRONMENTAL SERVICES

Poseidon Resources Option 1 & 2 (Grant components are labeled P1)

Former Boudreau

ATTACHMENT 3



CITY OF OCEANSIDE

WATER UTILITIES DEPARTMENT

September 19, 2007

To: Mr. Peter MacLaggan
Poseidon Resources Corporation
501 West Broadway, Ste. 1260
San Diego, CA 92101

From: City of Oceanside
Water Utilities Department
300 N. Coast Highway
Oceanside, CA 92054

Dear Mr. MacLaggan:

The City of Oceanside, Water Utilities Department is submitting a Letter of Expression of Interest in response to the Request for Expression of Interest by Poseidon Resources. The City of Oceanside is seeking funding for a Loma Alta Lagoon Acquisition and Restoration project located at the western end of Loma Alta Creek just before it reaches the Pacific Ocean. The project site is located north of Agua Hedionda Lagoon and Buena Vista Lagoon in the City of Oceanside.

The project site consists of five parcels: three owned by the City of Oceanside (2.62 acres) and two in private ownership (0.89 acres). This proposal includes the acquisition of the two parcels in private ownership and the restoration of all five parcels to wetland status. These five parcels, once restored, would add an additional 3.01 acres to an already 2.0 acres of restored lagoon located west of this project site.

The primary point of contact for the City of Oceanside will be:

Mo Lahsaie, Ph.D., Clean Water Program Coordinator
City of Oceanside Water Utilities
300 North Coast Highway, Oceanside, CA 92054
Telephone: (760) 435-5803
Fax: (760) 435-5814
Email: mlahsaie@ci.oceanside.ca.us

This project would help fulfill commitments of Poseidon Resources to contribute to Coastal Habitat Enhancement projects. The City of Oceanside hopes that this LEI will provide you with enough information to allow the opportunity for an interview with Poseidon in order for the company to gain a better understanding of the nature scope and implementation of the project.

Sincerely,



Greg Blakely,
Water Utilities Division Manager

Statement of Expression of Interest

The City of Oceanside is interested in participating in the Poseidon Coastal Habitat Enhancement Project.

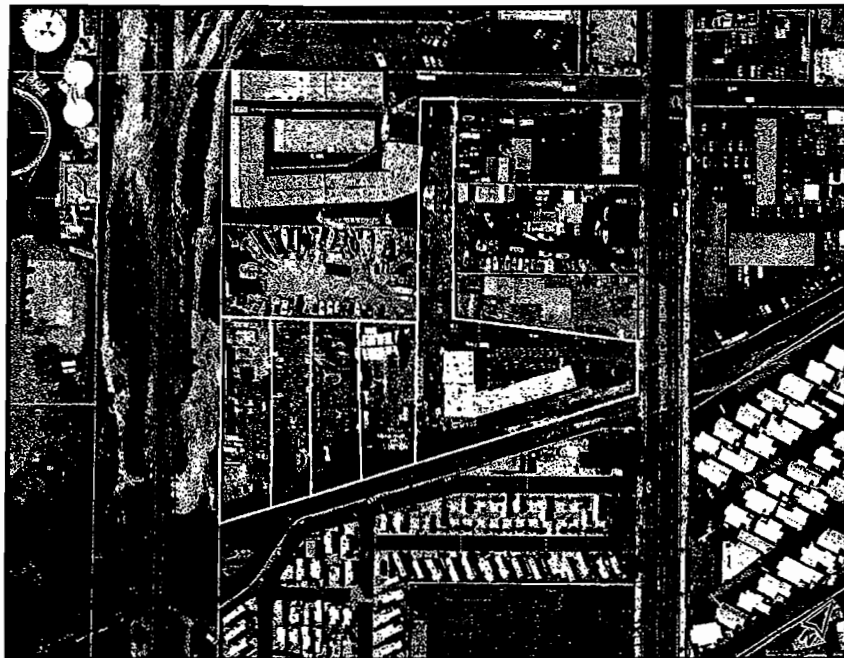
Brief Project Description

This is a new initiative which will require the acquisition of properties and then the conceptualization, permitting, design, funding and implementation of the project. The project site consists of five parcels: three owned by the City of Oceanside (2.62 acres) and two in private ownership (0.89 acres). This proposal includes the acquisition of the two parcels in private ownership and the restoration of all five parcels to wetland status. These five parcels, once restored, would add an additional 3.01 acres to an already 2.0 acres of restored lagoon located west of this project site. The largest parcel owned by the City of Oceanside is a flag lot where the "pole" of the lot would not be used as part of the restoration project because of the need to provide an access easement to an adjacent parcel. Thus the acreage for actual restoration, including a small parking area, would total approximately 3.01 acres.

There is 700 feet of stream corridor located on the bank of these five parcels between Pacific Coast Highway and the railroad tracks. There are 550 feet of stream corridor just west of this site has 2.0 acres of existing wetland habitat.

The Loma Alta Lagoon and neighboring Buccaneer Beach, located in the City of Oceanside, are visited by thousands of people each year. This area of the city is located at the west end of Loma Alta Creek just before it reaches the Pacific Ocean. The project site is located east of Interstate 5 between Coast Highway (Highway 101) and the railroad tracks used by Amtrak and the Coaster. Access to the site is from Coast Highway and there is a public walking trail along the southern bank of the stream from Coast Highway to the Pacific Ocean. Reclaiming these blighted industrial areas for lagoon enlargement and enhancement would result in increased lagoon acreage, reduced flooding incidents upstream and create educational opportunities for local residents and visitors.

Loma Alta Lagoon – Current Condition



Oceanside owns, from left to right, the 2nd, 4th and 5th Parcels
Proposal to acquire 1st and 3rd parcels and restore all five parcels to wetland condition

Loma Alta Lagoon – Circa 1950



Project Site

See the attached document for the conceptual view after restoration.

Commencement Date

Timelines

Acquisition

Zero – 3 months: Negotiations with property owners

3 months – 6 months: Phase I Environmental Assessment

6 months – 9 months: additional negotiations and assessments, if needed

9 months – 12 months: Escrow and Acquisition

Restoration

13 months – 16 months: Select Consultant

16 months – 20 months: Create restoration plan

20 months – 24 months: Acquire necessary permits

25 months: Demolition Disposal

26 – 27 months: Soil excavation

27 months – 33 months: Implement restoration and develop public education outreach plan

Budget

Project Task	City of Oceanside Funding	Wetlands Recovery Grant Funding
Acquisition		
Property Appraisals		\$7,000
Phase I Environmental Assessments		\$10,000
Phase II Environmental Assessments		\$75,000
Escrow		\$20,000
Property Cost		\$1,150,000
Total Acquisition		\$1,262,000
Restoration		
Value of Oceanside Properties	\$2,949,050	
Select Consulting Firm	\$5,000	
Permitting Fees		\$200,000
Demolition/Disposal	\$20,000	
Soil Excavation		\$1,092,000
Restoration		\$100,000
Public Education	\$5,000	\$5,000
Restoration Total	\$2,979,050	\$1,397,000
Total for Acquisition and Restoration	\$2,979,050	\$2,659,000

Project Benefits and Merits

With the significant decline of southern California wetlands since the 1950's this project would meet the strategies of the Southern California Wetlands Recovery Project (WRP) by acquiring property from willing sellers, restore the site to wetland status and provide outreach and education to the public. While other wetlands proposal request funding for the enhancement of an already existing lagoon, this project proposes the creation of lagoon surface water, and creation of new wetland habitat. This will meet the long-term vision of the WRP by creating a new "tile" in the mosaic of functioning wetlands systems in San Diego County.

Project Team

Name: Jerry Hittleman, Acting City Planner
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Address: 300 North Coast Highway, Oceanside, CA 92054
Telephone: (760) 435-3535
Email: jhittleman@ci.oceanside.ca.us

Name: Mo Lahsaie, Ph.D., Clean Water Program Coordinator
Organization: City of Oceanside Water Utilities
Address: 300 North Coast Highway, Oceanside, CA 92054
Telephone: (760) 435-5803
Email: mlahsaie@ci.oceanside.ca.us

Cynthia Mallett, Environmental Specialist
Organization: City of Oceanside Water Utilities
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Telephone: (760) 435-5807
Email: cmallett@ci.oceanside.ca.us

Successfully completed projects***Loma Alta Lagoon Enhancement Project***

A restoration project was completed in 2000 just west of the proposed project site. Currently there are 2.0 acres of restored wetland habitat located along 550 feet of stream corridor and is currently owned and maintained by the City of Oceanside. These 2.0 acres were restored with native landscaping and a habitat study was conducted in May/June 2002 of this restored area with wildlife observed using the restored area.

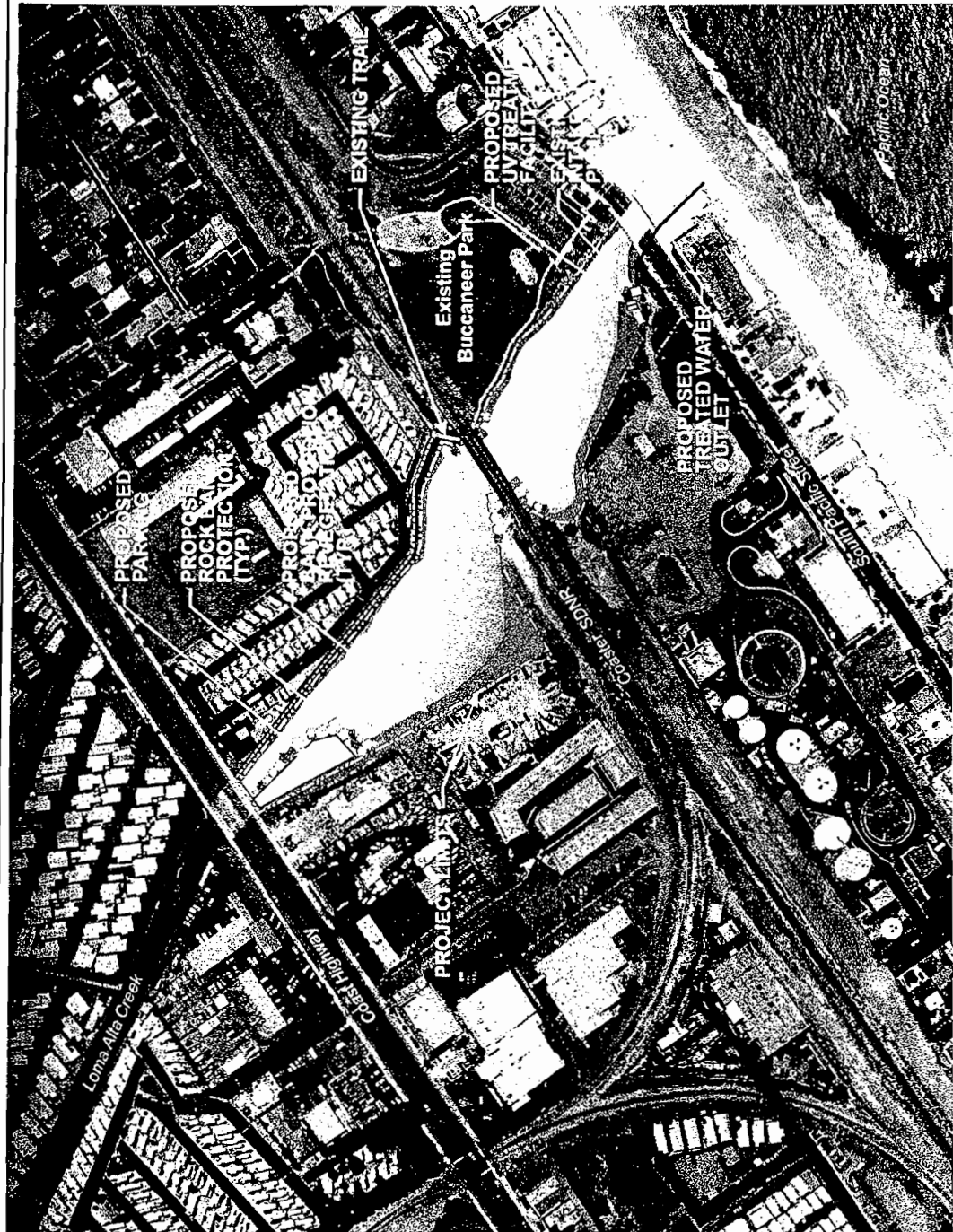
Myers Property Acquisition and Restoration

The City of Oceanside successfully completed an acquisition and habitat restoration project in January 2007 called the Myers Property Restoration and Erosion Control Project. The goal of the project was to improve water quality and reduce sediment in the Loma Alta Creek watershed, and improve habitat for the federally threatened California gnatcatcher. This project is located upstream from the Loma Alta Creek Lagoon.

Restoration was completed in January 2007, and involved three tons of trash removal, the stabilization of soils and the restoration of native plants to help reduce erosion and sediment load into the Loma Alta Creek watershed and improve habitat for migratory birds, raptors and numerous other species. The Myers Property Restoration and Erosion Control Project is the first publicly funded and community-based project to contribute to the overall health of the watershed. For more information about the project click on this link:
<http://www.oceansidecleanwaterprogram.org/pdf/myersproperty.pdf>

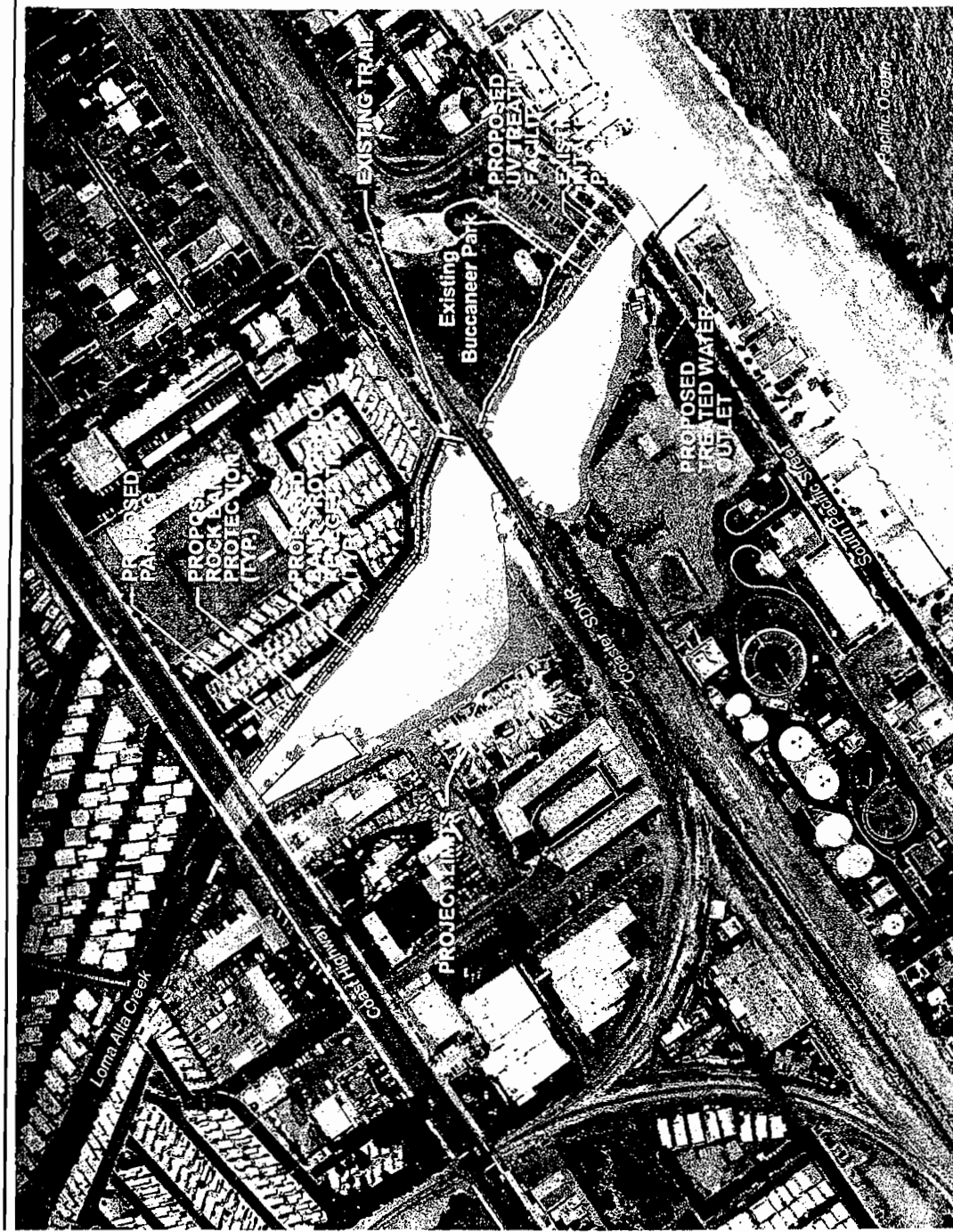
Respondent Contact Information

See cover letter for contact information.



CONCEPTUAL
WETLANDS AND TREATMENT PLAN
FOR LOMA ALTA CREEK SLOUGH

FIGURE 1



CONCEPTUAL
WETLANDS AND TREATMENT PLAN
FOR LOMA ALTA CREEK SLOUGH

FIGURE 1

ES:\P\001103\020155\05020132.dwg, September 23, 2005



ATTACHMENT 4

**An Expression of Interest for Development and Implementation of Coastal Habitat
Enhancement Project Associated with the Carlsbad Seawater Desalination Plant**

**Land acquisition for expansion of the Agua Hedionda Lagoon
Ecological Reserve**

Submitted by:

Agua Hedionda Lagoon Foundation



Respondents:

William S. Kloetzer, Ph.D.

Albert Cereda Jr.

September 24, 2007

Statement of Expression of Interest

The Agua Hedionda Lagoon Foundation (AHLF) is interested in participating in the Poseidon Coastal Habitat Enhancement Project.

Brief Project Description

This application is a request for funding to help purchase a parcel of land, owned by the Hall Land Company, and then to assimilate it with the Agua Hedionda Lagoon (AHL) Ecological Reserve (AHL-ER). The AHL-ER was formed in 2002. At that time, the CA Department of Fish and Game considered this land parcel (#20710134) highly desirable for including in the Reserve but they were unsuccessful at acquiring it¹. In January 2007, Hallmark Communities submitted to the city of Carlsbad a plan to build 40 town homes on parcel #20710134. This parcel, as shown in figure 1, is located on the north side of AHL and east of the Laguna Shores town house development. This ill-conceived development plan fragments portions of the Reserve and renders an even larger portion of adjacent wetland highly compromised as wildlife habitat. The current efforts to purchase this property may be the last opportunity for Carlsbad to set aside some of the rapidly disappearing California wetlands for appreciation by future generations.

The proposed strategy for land acquisition is for an organization (the City of Carlsbad or a non-profit land conservancy or an investor group) to help purchase or secure a loan to purchase the Hallmark parcel. The down payment for a loan may come from the combined financial resources of Poseidon, other contributors and investors, and possibly the State. Repayment of this loan would then be offered to local developers as mitigation for future projects. The property itself would be joined with the AHL-ER.

In order for this ambitious project to succeed, several critical issues must be addressed:

1. Determine if Hall Land Company is willing to negotiate sale of the property.
2. Raise sufficient funds to secure a loan and purchase the parcel.

¹ Personal communication with CA Dept of Fish and Game official

3. Enlist a potential third party to negotiate transactions (e.g., Nature Conservancy)
4. Resell the debt as mitigation for future development projects.

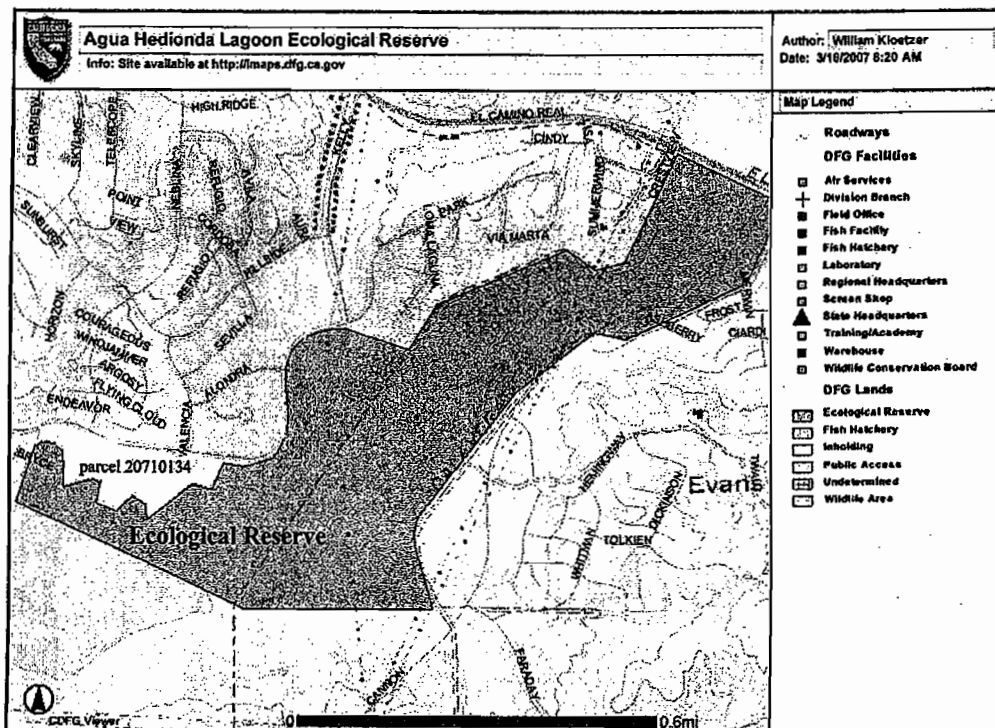


Figure 1. Location of the Hallmark property (parcel 20710134).

Commencement Date of Project Implementation and Early Objective Deadlines

- 26 Sep 07: Copies of the current project proposal will be circulated to AHL Board Members by e-mail at the next monthly Board meeting. The participation of other Board Members in negotiations and fund-raising activities will be discussed.
- Oct 07 objectives: 1) Identify additional project team members (e.g., concerned Carlsbad residents, Agua Hedionda Watershed Group members, Southern CA Wetlands Recovery Project members). 2) Discuss and coordinate project with Fish and Game Department officials (Warren Wong), Carlsbad City Planners (Mike Grimm, Christer Westman) and conservancy groups (e.g., CA Coastal Conservancy).

- Nov 07: Propose and discuss transaction with Hall Land Company.
- Early Dec 07: Identify additional potential funding sources.

Target Project Completion Date: July 2008

It is anticipated that once sufficient funds are obtained, a loan can be readily secured for land purchase. A to-be-named conservancy or non-profit agency or investor group will then hold and help negotiate selling the debt as mitigation for future development projects. It may be possible that some debt relief can be secured from still other sources. For example, a trails agreement throughout the AHL-ER might be negotiated with the Fish and Game Department in exchange for joining the parcel with the Reserve.

Earliest Date When the Project Will Reach Full Capacity to Produce Sustainable Environmental Benefits

Land acquisition is unique in that sustainable and dramatic environmental benefits are both immediate and sustainable for many years to come. These effects will include protecting and increasing habitat for migrating birds and endangered species. It will also help insure that nearby archeological sites will remain undisturbed. Restoration of the site for even greater utility as wildlife habitat will be feasible whenever funding becomes available either in the months or years to come. If commercial development proceeds, then the damage is immediate and irreversible.

Length of Time of Sustainable Project Environmental Benefits

We envision that successful completion of this project will save diminishing CA wetlands for future generations of California residents.

Budget

A down payment on a loan to purchase the entire Hallmark parcel conceivably may require either a large portion or all of the funding being offered by Poseidon.

Alternatively, funding offered by Poseidon could be combined with contributions from

other sources. The exact (or approximate) amount needed will be determined by November 2007 (see Early Objective Deadlines).

Project Benefits and Merits

The project proposal to purchase and add contiguous property to the AHL-ER will have several important benefits:

- It will expand habitat for endangered wildlife and migrating birds.
- It will protect and maintain the adjacent Ecological Reserve as useful wildlife habitat.
- Nearby archeological sites will remain undisturbed.
- Foot trails through the Reserve will be proposed to the Department of Fish and Game in exchange for adding land to the Reserve.
- Enhancing the quality of the AHL-ER will boost eco-tourism in the area.

We strongly request that you do evaluate and compare the sustainable impacts of all submitted projects. A project similar to our proposal is underway that will join privately owned (Mitsuuchi) property with the Batiquitos Lagoon Ecological Reserve. We suggest that selective expansion and enhancement rather than destruction of a CA Ecological Reserve located in "our own backyard" will be a priceless asset to the community for years to come. We offer Poseidon the opportunity to participate and take pride in helping to achieve this goal.

Current Project Team and Respondent Contact Information

Agua Hedionda Lagoon Foundation

- William Kloetzer, Ph.D. (primary point of contact)
4335 Sunnyhill Drive Carlsbad, CA 92008
Tele: 760-720-0804 Fax: none E-mail: Carlsbad-bill@sbcglobal.net
- Alfred Cerda Jr.
1434 Clarence Drive Vista, CA 92084
Tele: 760-941-1829 Fax: none E-mail: cerda04fam@cox.net

ATTACHMENT 5



September 24, 2007

Peter MacLaggan
Poseidon Resources Corporation
501 West Broadway #1260
San Diego, CA 92101

Dear Peter:

Enclosed you will find three copies of our proposal for the Poseidon Coastal Habitat Enhancement Project.

We will be emailing you a copy of this proposal as well.

Sincerely,

Nikki Weaver
Discovery Center Director
Agua Hedionda Lagoon Foundation

STATEMENT OF EXPRESSION OF INTEREST

The Agua Hedionda Lagoon Foundation is interested in participating in the Poseidon Coastal Habitat Enhancement Project.

BRIEF PROJECT DESCRIPTION

Invasive exotic plants have colonized large areas of the coastal areas and Agua Hedionda watershed and have significantly degraded their essential functions and beneficial uses. Extensive stands of invasive exotic plant species alter the riparian/wetland trophic structure, organic loading, nutrient spiraling, dissolved organic matrix, biogeochemistry, contaminant complexation, evapotranspiration, turbidity, avian and aquatic species composition and abundance, and the ability of the habitat to support rare and endangered species.

The density, biomass and diversity of invasive plant species is so extensive in the Agua Hedionda Watershed that the ability of the natural plant communities to treat nutrient and contaminant loading is being significantly reduced, and internal generation/loading and recycling (spiraling) of nutrients is substantial and eutrophic. Below is an example of arundo donax completely taking over a portion of the watershed and totally displacing native plants and destroying the natural habitat.

Plant surveys of the Carlsbad Watersheds indicate that the most extensive invasive species include the following: Pampas grass, arundo, tamarisk, artichoke thistle, castor bean, german ivy and myoporum.

Our project proposes a major effort to remove the predominant species of invasive plants and to restore native vegetation in the Agua Hedionda Watershed as an essential step in re-establishing the hydrologic and ecological functions of these riparian and coastal wetland habitats.

Our intention is to collaborate as much as possible with other groups conducting invasive species projects within the Carlsbad Hydrologic Unit, in terms of the sharing of information such as aerial photographs, GIS mapping and landowner notifications and to avoid duplication of work.

MAJOR COMPONENTS OF PROPOSED PROJECT:

1. Locate and map the non-native invasive vegetation to establish a good baseline for measuring project effectiveness and future tracking.
2. Using established, effective means of removing exotic invasive plant species that will reduce the likelihood of re-infestation.
3. Consult with resources agencies in order to minimize impacts on watershed ecosystems.
4. Revegetation of treated sites with appropriate native plants.
5. Measure water quality, benthic macroinvertebrates, and habitat parameters before and after site treatments to determine ecosystem improvements.
6. Use public outreach and education to emphasize the connection between individual behaviors and watershed health.

PROJECT MILESTONES:

Proposed Commencement Date: January 1, 2008

Target Completion Date: December 31, 2009

Earliest Date When the Project will reach full capacity to produce sustainable
Environmental benefits: September 2009

Length of Time of Sustainable Project Environmental Benefits (in Years):
indefinitely

BUDGET:

1. Project Manager: \$150,000
2. Project Assistant: \$80,000
3. GIS Mapping: \$50,000
4. Sub-contractors for removal of Invasive Species: \$500,000
5. Sub-contractors for watershed testing and re-vegetation of treated sites: \$150,000
6. Grant Administration for AHLF: \$70,000

Total Budget: \$1,000,000

PROJECT BENEFITS AND MERITS:

Our project proposes a major effort to remove the predominant species of invasive plants and to restore native vegetation in the Agua Hedionda Watershed as an essential step in re-establishing the hydrologic and ecological functions of these riparian and coastal wetland habitats. This project is expected to significantly improve the conditions, functions and values of the riparian/wetlands habitats by reducing the detrimental processes and increasing the ability of the riparian/wetlands to sequester contaminants, increase pathogen mortality, reduce flooding and bank erosion, and reduce sediment transport.

The Watershed Management for the Carlsbad Hydrological Unit (CHU), completed in 2002, called for a comprehensive approach to invasive plant species control and removal: *"A major effort to remove these invasive plants and to restore native vegetation in these watersheds is critical to re-establishing the hydrologic and ecological functions of these riparian and coastal wetland habitats."* This project also implements the goals and objectives of the SDRWQCB as framed in their Watershed Management Chapter: *Prevent the introduction of non-native species. Eradicate such species that are already established, where possible. Where eradication is not possible, remove, control, prevent the spread of, and reduce the impact of and area occupied by such species.*

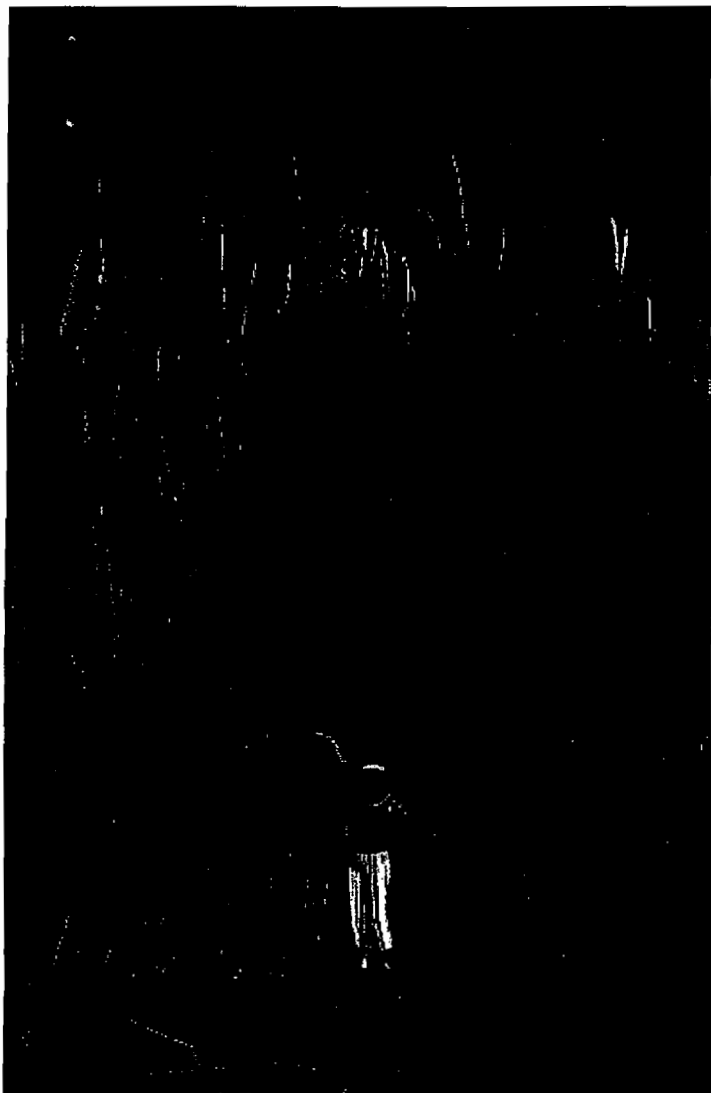
PROJECT TEAM:

The required staffing for this project is identified in the above budget. The AHLF does not currently have staff available to be assigned to this project. If the project is approved, qualified individuals will be hired or sub-contracted to fill the needed positions.

Agua Hedionda Lagoon Discovery Center Director Nikki Weaver has previously worked as a Project Coordinator on a similar invasive species project in the North County. Nikki will assist in establishing the project infrastructure and as the AHLF liaison with Poseidon Resources.

RESPONDENT CONTACT INFORMATION:

Nikki Weaver
Agua Hedionda Lagoon Foundation
1580 Cannon Road
Carlsbad, CA 92008
(760) 804-1969
nkweaver@aguahedionda.org



Arundo Donax



Pampas Grass

ATTACHMENT 6



Carlsbad Aquafarm

Letter of Expression of Interest for Poseidon Resources Coastal Habitat Enhancement Project

Prepared for: Carlsbad Aquafarms Inc. Prepared by: Dennis Peterson, Biologist

Contact Person: John M. Davis

Phone; 760-438-2444

Email info@carlsbadaquafarm.com

Sep 20, 2007



Carlsbad Aquafarm

Expression of Interest

Carlsbad Aquafarm would like to express its interest in participating with the Poseidon Resources Coastal Enhancement Project. It is our strong belief that our location at Aqua Hedionda Lagoon, physical facilities, and qualified personnel provide a unique opportunity for us to efficiently implement Poseidon Resources efforts at Coastal Habitat Enhancement.

Project Summary

Description

California coastal waters have historically been home to as many as seven species of Abalone. They are an integral part of the California coastal marine ecosystem, and were, in the recent past a commercial and recreational fishery, that provide both a source of history and pride, with which Californians identify strongly. However, our fondness for this California resource has resulted in stock depletion, and the recent closure of both the commercial and recreational fisheries for all abalone species in this region. A project of abalone stock enhancement can provide both a real ecological benefit and help replenish and sustain a source of California pride and history.

Stock enhancement of abalone has been done at different locations around the world, most notably in Japan where ongoing efforts have been underway for 25 to 30 years. There have been efforts locally with our native species as well and we can use the information gleaned from these efforts to maximize the success of our efforts. The details of this can be described in much greater detail, with supporting references in a full project proposal, however some key points are as follows; First many out-planting efforts have encountered a high mortality of animals, due in part or in



Carlsbad Aquafarm

combination with the following factors, stress, predation, migration, and starvation. Studies have shown, that the rate of mortality decreases directly with the age of the animals at the time of out-planting. The cost, however, per animal reintroduced increases greatly with age. This does allow for a rather simple determination of the cost to benefit ratio, where the age used at the time of out-planting will be determined by the greatest number of animals per dollar, which maintain a high probability of survival. Secondly, past efforts have had difficulty measuring success, from either inappropriate or infrequent monitoring, inability to differentiate introduced stock from wild stock, or the inherent difficulty of finding an animal whose evolutionary adaptation is the ability to remain cryptic. These problems can be avoided with a well defined monitoring plan, qualified experienced divers, and the use of cultured animals of an age, at the time of out-planting that allow for the existence of identifiable banding patterns easily distinguishable from the wild stock. Thirdly efforts have suffered from migration from the site, or the uprooting and dislocation of out-planting habitats. This can be addressed with the proper anchoring and possible temporary caging of out-planting habitats, combined with the proper site selection of suitable abalone habitat. Finally, with regards to species that broadcast spawn, criticisms of the genetic consequences, namely the overall reduction of genetic diversity of the extant population, have been made. This may result from the out-planting of large numbers of animals with a low representation of genetic diversity, hence low effective population size. This can best be augmented by increasing the number of broodstock available and incorporating new additions of wild broodstock, which has the added benefit of maintaining potential local adaptations.

We believe the prospect of this funding will facilitate a union of efforts by two currently separate entities, with common goals, where the strengths of each will naturally lend themselves to address problems normally associated with many of the re-seeding efforts stated above.

We believe habitat enhancement efforts can best be accomplished by dovetailing with existing abalone stock enhancement currently being done by Dr. David Lapota at SPAWAR/ Southern California Marine Biological Solutions Inc. Dr. Lapota has conveyed his willingness and enthusiasm at the prospect of this joint effort.

Carlsbad Aquafarm has a long history of abalone culture, where we currently have approximately 200 broodstock which includes about 20 wild animals, and the rest comprising recent cultured descendants of wild animals from this region. Carlsbad Aquafarm is currently concentrating it's efforts on commercial farming of the Green Abalone *Haliotis fulgens*, however it is also culturing both the Red and Pink Abalone, *H. rufescens* and *H. corrugata*. The farm is well equipped with the facilities and



Carlsbad Aquafarm

personnel to spawn and raise abalone, as well as experienced divers, familiar with abalone biology and ecology.

Dr. Lapota's stock enhancement efforts are currently concentrated in multiple sites south of the sewage outflow on Point Loma and where his sites well exceed 50 acres. He is currently out planting Green and some Pink abalone cultured from the facility at SPAWAR/ Southern California Marine Biological Solutions Inc. These are being reintroduced in portable substrates for out-planting, which are individually termed a "pod" for transfer of reared animals to the enhancement site. This "pod" may be further modified, on site, by elevation on cinder blocks, anchoring with metal posts driven into the bottom, and enclosed in a plastic coated wire mesh. Dr. Lapota has been using abalone 3 to 4 inches in size. Which allow for easy identification as cultured animals, and provide animals that are already sexually mature.

The dovetailing of these two groups would immediately increase the effective population size, in the form an increased number of broodstock, of the abalone being out-planted. Since both facilities have been deemed free of Sabellid worm infestation by the California Department of Fish and Game, they are both able to immediately provide animals for stock enhancement. In this way, an existing stock enhancement already addressing most of the difficulties described above, and with proven results can immediately benefit from a larger number of animals to reintroduce. There would also be an immediate increase in qualified personnel coming from Carlsbad Aquafarm to help undertake the out-planting and monitoring of sites.

Using funds provided by Poseidon Resources, a joint effort between Carlsbad Aquafarm Inc. and SPAWAR/Southern California Marine Biological Solutions Inc. would allow physical support and resources for existing out-planting sites, but could also undertake the addition of new sites perhaps closer to Aqua Hedionda.

The start date of a project could be almost immediate given the existing enhancement efforts of Dr. Lapota, and the current stock of abalone at Carlsbad Aquafarm. The ultimate time frame of the project will be estimated at 3 to 5 years, but will ultimately depend on the amount of funding available, and whether there is any new additional sites considered. Monitoring of sites will be estimated to occur quarterly, however the frequency and methods used for this deserve greater detail and collaboration in a more detailed proposal.

This project will be deemed successful with the survival and identification of gravid adults from the re-introductions that are being sustained in the enhancement sites. The size of animals being proposed allow for identifiable bands, unique to cultured animals, which in turn make identification easier. As previously stated, the size



Carlsbad Aquafarm

being proposed also has the added benefit of being reproductively mature at the time they are re-introduced. While migration from the site can undoubtedly occur, if survival of the animals is high and divers with experience looking for abalone are used, then the monitoring efforts should have little trouble confirming that success.

If it were in the interest of Poseidon Resources, a similar project could be drafted to incorporate the out-planting of Urchin species. We have also considered a plan to modify our mussel grow out lines to provide a more permanent habitat for blennies. If either of these have a greater or additional appeal to Poseidon Resources, we would be glad to submit a proposal(s)

Budget

This budget is approximate yet realistic for the sake of the LEI, but should be considered subject to modification in a more detailed proposal.

Abalone (3-4").....	\$6/individual x 100,000 animals.....	\$600,000
Pods.....	\$500/unit x 20	
units.....		\$10,000
Divers.....	\$1500/day x 40	
dives.....		\$60,000
Boat.....	\$1000/day	
.....		\$40,000
Facilities/Labor/infrastructure.....		\$200,000
Total		
.....		\$910,000

Project Team

Dennis Peterson-Biologist/Diver Carlsbad Aquafarm Inc.



Carlsbad Aquafarm

Dr. David Lapota- Biologist SPAWAR/Southern California Marine Biological Solutions Inc.

Christine Steinke Biologist/Hatchery Manager CA

Brandon Lincicum Biologist/Diver Carlsbad Aquafarm Inc.

Andy Davis- Vice President/Diver

Norm Abell- CFO Carlsbad Aquafarm Inc.

John Davis - CEO Carlsbad Aquafarm Inc.

ATTACHMENT 7



BUENA VISTA LAGOON FOUNDATION • P.O. BOX 4516 • CARLSBAD, CALIFORNIA 92008

September 24, 2007

Mr. Peter MacLaggan
Poseidon Resources Corporation
501 West Broadway, Suite 1260
San Diego, CA 92101

The Buena Vista Lagoon Foundation is interested but regrets it is cannot directly propose a project in response to your "Request for Expressions of Interest" for development and funding of a coastal habitat project at this time.

Due in large part to prior Coastal Conservancy funding but with substantial local donations the Buena Vista Lagoon Restoration Feasibility Analysis was completed. Additional work on Preliminary Engineering and for the subsequent Environmental Impact Report is currently in process. Specific enhancement projects cannot proceed until a Restoration Plan for the Lagoon is adopted.

Additional funding would facilitate the completion of the Restoration/Enhancement Plan Environmental Analysis and allow timely mitigation projects within the Buena Vista Lagoon Ecological Reserve. Contributions to this process may qualify as mitigation for the Poseidon Resources project if approved by the various agencies. The Foundation is available to facilitate if you wish to pursue this option.

If you have any questions please contact me at 760-727-3866 or email wootland@cox.net.

Sincerely,

Ronald W. Wootton, PLS
Executive Director

NON PROFIT PUBLIC CHARITY

ATTACHMENT 8

Expression of Interest

For

Poseidon Resources

Request For Development And Implementation Of Coastal Habitat Enhancement Project

Statement of Expression of Interest

The State of California, Department of Parks and Recreation, a public entity is interested in participating in the Poseidon Coastal Habitat Enhancement Project in an effort to restore coastal bluff habitat and provide public interpretation for the beach and natural areas at Frazee State Beach located within the City of Carlsbad.

Brief Project Description

The coastal bluff restoration project at Frazee State Beach encompasses approximately 5.8 acres of natural coastal bluff area located between Pine Avenue to the North and the mouth of Hedionda Lagoon to the South or "Lower Tamarack" (approximately ¼ mile from the Encina Power Station) and bounded by public walkways above and below the bluff (Refer to figure 1).

Much of the original coastal bluff habitat has been degraded by infestations of non-native plant species, volunteer trails, trash dumping, poorly engineered and maintained storm drain outfalls, and a lack of funding for adequate maintenance. In recent years several of the impediments to restorations have been resolved: retaining walls were built to reduce the rate of bluff erosion, some of the storm drains were redesigned, elevated public stairways were constructed, and the upper portion of the bluffs were fenced. These improvements provided condition for a successful coastal bluff restoration project.

Approximately 3.2 acres of coastal bluffs are available for complete habitat restoration. The remaining 2.6 acres support some native species but will require enhancement to become self sustaining.

The proposed project requires funding to eliminate non-native plant species from the project area, purchase and install native plant species appropriate to southern California coastal bluffs re-vegetate water and maintain the area until vegetation is established, and create an interactive public interpretive program to support public involvement and education concerning the natural coastal environment.

The proposed project is approved by the Department of Parks and Recreation and part of the Carlsbad State Beach Area General Plan.

Commencement of Project Implementation would be February 2008 beginning with the eradication of non-native plant species from the project area. The planting of new native vegetation and public participation would commence on "Earth Day" April 22, 2008. Continued planting, watering and maintenance would continue until December of 2011 under the terms of the proposed project grant agreement.

Ongoing public interpretive and volunteer programs would be sustained by a combination of departmental funding and a small management endowment after the end of the grant cycle.

The Department of Parks and Recreation believes sustainable environmental benefits would be visible within two (2) years of inception.

Budget**Frazee State Beach Bluff Re-vegetation Estimated Costs**

Planning Costs	DPR	Poseidon	Total Cost
Landscape design planning / public meetings		\$20,000.00	\$20,000.00
Environmental Scientist*	\$5,000.00	\$5,000.00	\$10,000.00
Landscape Architect*	\$5,000.00	\$10,000.00	\$15,000.00
Archeologist*	\$5,000.00		\$5,000.00
Park & Recreation Specialist*	\$5,000.00		\$5,000.00
	\$20,000.00	\$35,000.00	\$55,000.00

Treatment Type/ Description	Acres Affected	Cost/Acre	Total Cost
Perennial Invasive Plant Removal, herbicide treatment	18,000 sq. ft.		\$12,500.00
Habitat Restoration including 3 yrs. maintenance	3.2	\$60,000.00	\$192,830.00
Habitat Enhancement including 3 yrs. maintenance	2.6	\$40,000.00	\$104,000.00
Long-term Maintenance Endowment			\$100,000.00
			\$409,330.00

Interpretation/Public Outreach	DPR	Poseidon	Total Cost
Interpretive Specialist (PI) 3 yrs. placement		\$25,500.00	\$25,500.00
Interpretive Signage	\$2,500.00	\$8,500.00	\$11,000.00
Environmental Scientist*	\$10,000.00	\$20,000.00	\$30,000.00
Park Superintendent*	\$5,000.00		\$5,000.00
Archeologist*	\$5,000.00	\$5,000.00	\$10,000.00
Park & Recreation Specialist*	\$5,000.00	\$5,000.00	\$10,000.00
	\$22,500.00	\$64,000.00	\$91,500.00

*Performance Monitoring would be completed by DPR staff specialists noted above.

Total Expenditure to be funded by Poseidon \$508,330.00

Project Benefits and Merits

The proposed project encompasses approximately six (6) acres of undeveloped and protected coastal bluff. The area is defined within the Park's General Plan to be utilized for re-vegetation of native flora indigenous to the area.

The proposed project site is situated close to the Encina Power Station and the Aqua Hedionda Lagoon. The area currently supports some unique native plant and animal species including silvery legless lizard, side-blotched lizard, cotton-tail rabbit, southern and western-tailed blue butterfly, argiope spider, sand verbena, coastal cholla, box-thorn, and numerous others. With restoration the proposed site is expected to attract other native wildlife.

The proposed project promises long-term environmental enhancement benefits by protected the proposed area from storm erosion. In addition, because the project area is an island of coastal bluff within a popular urban area, public interpretation and education programs will flourish due to the location. This coastal habitat enhancement project would serve to connect the community and beach-users with the restoration process and aesthetics of native southern California coastal landscapes.

The project calls for the eradication of non-native plant species, the reintroduction of native plant species and a public interpretive component consisting of volunteer work projects, education of Southern California natural landscapes, value of open space and native wildlife, and value of native plants.

Project Team

Brian C. Ketterer
Sector Superintendent
CA Department of Parks and Recreation
San Diego Coast District – North Sector
2680 Carlsbad Blvd.
Carlsbad, CA 92010

Darren Smith
Environmental Scientist
CA Department of Parks and Recreation
San Diego Coast District
4477 Pacific Hwy.
San Diego, CA 92110

Angela O'Hara
Public Volunteer
2855 Camino Serbal
Carlsbad, CA 92009

Expression of Interest

For

Poseidon Resources

**Request for Development and Implementation of Coastal Habitat Enhancement
Project**

Submitted by:

State of California
Department of Parks & Recreation
San Diego Coast District
North Sector Office
2680 Carlsbad Blvd.
Carlsbad, CA 92010
(760) 720-7001
FAX (760) 720-6378
Angela.ohara@gia.edu
bketterer@parks.ca.gov